

Explore Our World Lesson Planner 5

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On the Cover

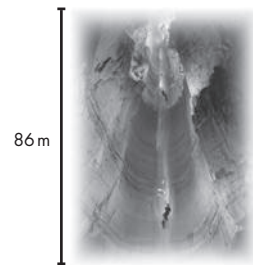
MYSTERY FALLS

FAST FACTS

Mystery Falls is located in Chattanooga, Tennessee, USA.

Mystery Falls is about 86 m (281 ft) deep.

Mystery Falls is the deepest pit in Tennessee.



Explore Our World Online

Go to: myNGconnect.com

Click on: For Educators

Username: owteacher@natgeo.com

Password: natgeo

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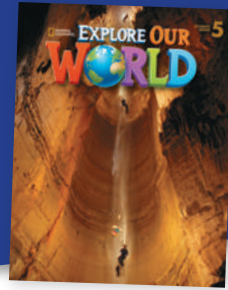
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Introduction

Explore Our World, a six-level primary series from National Geographic Learning, uses real-world content, stunning photographs and video from National Geographic, and a variety of interactive digital resources to fully engage and motivate students as they learn about the world in English. Young learners will be captivated by the beautiful photography and high-interest content relevant to their world as they learn about people and places from across the globe. *Explore Our World* is unique in the way that it brings the real world, with all its beauty and diversity, into the English-language classroom.



STUDENT BOOK Walk-through



UNIT OPENER

The Unit Opener uses high-interest photographs to engage students, present the unit theme, and provide opportunities for speaking and listening.

A goal-setting activity focuses student attention.

A teacher-led warm-up activity provides suggestions for pre-teaching of unit themes and target structures.



Image captions provide useful cultural and geographic information for instructors to discuss with learners.

VOCABULARY 1

Target vocabulary is presented visually, using photographs and photo-realistic art, to create interest and enhance retention.

1 Listen and read. 18-221

2 Listen and repeat. 18-222

There are three main types of musical instrument:

- Wind instruments - To make music, you blow air through them with your mouth. The **saxophone** and the **flute** are wind instruments.
- String instruments - They make music when you move the strings. The **guitar** and the **violin** are string instruments.
- Percussion instruments - You hit or shake them. The **drum** is a percussion instrument. The *thump, thump, thump* of a percussion instrument makes the **beat**.

3 Would you like to be in a **band**? You have to **practice hard**, but when your band sounds good, you can play for an audience. Invite your friends to the **concert**! If you don't play an instrument but you have a good voice, you could be the **lead singer**!

4 Work with a partner. What did you learn? Ask and answer.

How many types of instrument are there?
There are three main types.

Mascots model dialogues that help students use target language to communicate.

All target language is recorded on audio CDs to help students with pronunciation and practice.

RESOURCES

Lesson Planner with Audio CD and Teacher's Resource CD-ROM

The **Explore Our World Lesson Planner**, with Audio CD and Teacher's Resource CD-ROM, provides everything needed to successfully plan, teach, and supplement lessons:

- a detailed scope and sequence
- explicit instructions for teaching vocabulary, grammar, and songs
- answer keys and audio scripts for activities in the Student Book and Workbook
- support for teaching English in English
- teaching tips for using the *Explore Our World Video* and the Classroom Presentation Tool
- an Audio CD containing recordings of exercises, activities, and readings in the Student Book

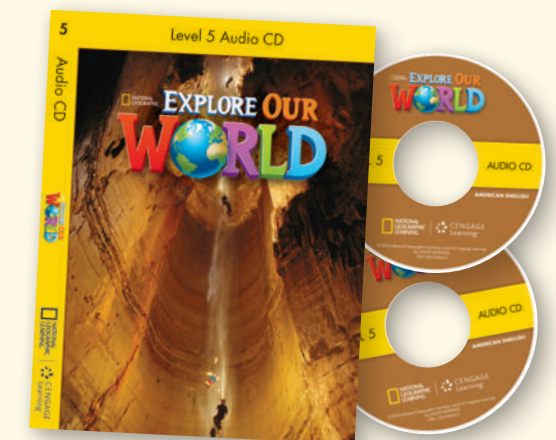
The **Teacher's Resource CD-ROM**, provided with the *Explore Our World Lesson Planner*, supplies additional teaching resources, including:

- pacing guides for easy lesson planning
- printable worksheets and templates for in-class games and activities
- Writing worksheets for additional Writing practice
- Project worksheets for optional theme-related closing activities
- customizable Home-School Connection Letters

Audio CD

The **Explore Our World Audio CD** provides audio content that aligns with all Student Book content:

- language presentation and review
- contextualized vocabulary
- original songs
- readings
- games and activities



GRAMMAR 1/VOCABULARY 2

Grammar lessons include natural examples of real-world language.

GRAMMAR 1B.823
Have you ever played the piano? Yes, I have.
Have you ever danced to this music? No, I haven't.
Has Lisa ever been to a concert? Yes, she has.
Has she ever heard the saxophone? No, she has never heard it.

4 Read. Complete the sentences. Use *have* or *has*.

- This song is new. I haven't heard (not / hear) it before.
- I _____ (never / go) to see an opera. I don't think I'd like it.
- _____ (listen to) this band? Yes, I have.
- My dad _____ (never / dance)!

5 Play a game. Use the game board on page 109. Play in a small group. Ask and answer.

6 Listen and repeat. Then read and write. 1B.824

hip-hop classical
pop jazz rock

- A large group of players, with violins, saxophones, and flutes often plays _____ music.
- Artists don't sing this kind of music. They say the words, instead. It's called _____.
- A small band with wind instruments, like the trumpet and saxophone, often plays _____.
- This music is made for many, many people to enjoy. It's easy to listen to. It's _____ music.
- A type of music with the guitar and a strong beat is _____.

7 Work with a partner. Talk and stick. Rank the types of music. (1 = most favorite) Discuss your favorite music and give examples of songs and performers.

1 2 3 4 5

Chinese opera
Have you ever gone to a concert?
Yes, I have. It was great!

Sticker activities in each unit provide reward, motivation, and interactive practice.

GRAMMAR 2/SONG/THE SOUNDS OF ENGLISH

Additional grammar is presented through photographs, illustrations, and activities. Group and pair work gives learners the chance to use structures in conversation as they collaborate with classmates.

GRAMMAR 1B.825
He sings **more loudly than** I do. She plays the violin **better than** he does.
I play the guitar **more often than** my brother. He practices piano **less often than** I do.
She rides her bike **more carefully** these days. They sing **worse than** they used to!

8 Work with a partner. Make comparisons. Ask and answer. Take turns.

- Name two singers. Who sings more beautifully? Who sings more loudly?
- Name two athletes. Who runs faster? Who wins more often?
- Name two relatives. Who works or studies harder? Who speaks more quietly?
- Name two types of music. Which type do you dance to better? Which do you listen to more often?

9 Play a game. Play with a partner. Take turns. Spin and make sentences.

10 Listen, read, and sing. 1B.826

Music Is Fun
Have you ever listened to hip-hop? I listen to all kinds of music. It's amazing fun.
Listen to the saxophone. Listen to the beat. Listen to the melody. Feel it in your feet!

THE SOUNDS OF ENGLISH 1B.827
hat

11 Listen and repeat. Pay attention to the sound of *o* in each word.

- pop rock
- hip-hop hobby
- spot copy

The Sounds of English activities found in every unit provide opportunities for students to listen to and practice English pronunciation.

A unit song supports the unit theme. Lyrics incorporate unit target vocabulary and grammar. Each song is easy to learn and remember, and models natural rhythm and intonation.

RESOURCES

Workbook

The **Explore Our World Workbook** contains exercises that reinforce and consolidate Student Book instruction, including listening, speaking, reading, writing, grammar, and vocabulary activities.

The Workbook includes the following:

- 8 pages of skills practice and activities, as well as additional readings, for each unit
- unit review sections
- practice with English pronunciation and sound-spelling relationships
- audio for all listening comprehension and review sections, provided on an Audio CD bound in with the Workbook, or accessed online through myNGconnect

14 Listen and read. 1B.828

It's All Music

The oldest instrument ever found is more than 35,000 years old! It's a flute. Instruments of this type are called wind instruments because the music comes from moving air. Each instrument has a shape that makes its sound different. Some wind instruments have holes for fingers. Others have buttons to press. Flutes and trumpets let you change the way the air travels.

Another way to make music is with strings. When you slide a finger over a string or pluck it, it makes music. Thick, thin, long, and short strings all make different notes. Musicians use a bow to play some string instruments. The bow is a piece of wood with hair or a string stretched between its ends. You can also make music by hitting or shaking something that makes a sound.

Percussion instruments can be made from many things. That's because most things make a sound when you hit them. A drum is a percussion instrument. A piano is a keyboard instrument, too. When piano keys are pressed, hammers inside the piano hit the strings to make music.

15 Match the instruments and their types. Check the correct column.

	Wind	String	Percussion
Drum			✓
Flute	✓		
Guitar		✓	
Piano			✓
Saxophone	✓		
Violin		✓	

Match colored dots first string when he was four years old.

Explore Our World Picture Cards including The Sounds of English

The **Explore Our World The Sounds of English** cards provide additional support for vocabulary and English pronunciation and phonics.

They include individual and contrasted English sounds with related images and spellings.

The Sounds of English cards are available online through myNGconnect.

pet said leopard bread

elephant

glass grass

light right
lamp ramp
long wrong

CONTENT READING/MISSION

Real-world content readings develop language through topics such as science, nature, history, art, culture, music, and sports.

National Geographic Value and Mission pages explore and explain common values such as practicing sportsmanship, showing respect for others, caring for our planet, looking after animals, and staying healthy.

Infographics show factual information in fun and sometimes surprising ways.

Graphic organizers help students collect, organize, and visualize information.

12 Listen and read. EN, 428

Listen to This!

"Hey, turn that music down!"

Do you ever wonder why your parents tell you to turn the volume down when you're listening to loud music? It's not because they don't like the type of music. (Well, hip-hop might not be their favorite music.) It's important to listen to music and other sounds at the right volume because if you don't, it can hurt your ears!

Did you know that sound travels in waves? Sometimes, a sound is too high or too low for people to hear, depending on how fast or slow the sound waves are moving. The movement of sound can be measured in units called hertz (Hz). The range that humans can hear is 20–20,000 Hz. Dolphins can hear sounds from 75–200,000 Hz! That means they can hear things we can't.

We measure the volume of a sound in decibels (dB). The sound of people whispering is about 30 dB, the sound of a rock concert is closer to 115 dB, and the sound of a jet engine is about 140 dB! The maximum output of most MP3 players is between 70–90 dB, which is really loud! Try to keep the volume at 50 dB, or a level that allows you to easily hear people around you talking. Your ears will thank you!

			
Elephant	Human	Dog	Dolphin
5–10,000 Hz	20–20,000 Hz	40–60,000 Hz	75–200,000 Hz

13 Role-play. Imagine you have a younger brother or sister who is listening to very loud music. Tell him or her to turn down the sound and explain why very loud music is not good.



Change through music.

Has a song ever made you feel differently about something? How did the song change you?

NATIONAL GEOGRAPHIC Jack Johnson
National Geographic Arts Ambassador for the Environment

"Music can change the world. It can inspire people to care, to do something positive, to make a difference."

CLASSROOM PRESENTATION TOOL

A **Classroom Presentation Tool**, provided on DVD, is available for each level of *Explore Our World*. The Classroom Presentation Tool integrates a variety of teaching resources including video, songs, games, language presentations, and student activities, which can easily be used with a computer or Interactive Whiteboard (IWB).

For each unit, the DVD includes the following:

- interactive unit-opening activities that provide the setting for each unit's theme
- presentation of target vocabulary and grammar-through video and animation
- fun classroom activities that practice what has just been presented
- songs presented in two ways: as a video with a singing host and as a karaoke-style sing-along
- reading activities that support reading selections



EXPLORE OUR WORLD STUDENT ACTIVITIES CD-ROM

Explore Our World student activities, provided on a **Student Activities CD-ROM** bound with the Student Book or accessed online through myNGconnect, are fun, engaging, game-like activities that reinforce and expand on Student Book content. Each unit has two Vocabulary and Grammar activities, as well as a Reading activity.

RESOURCES

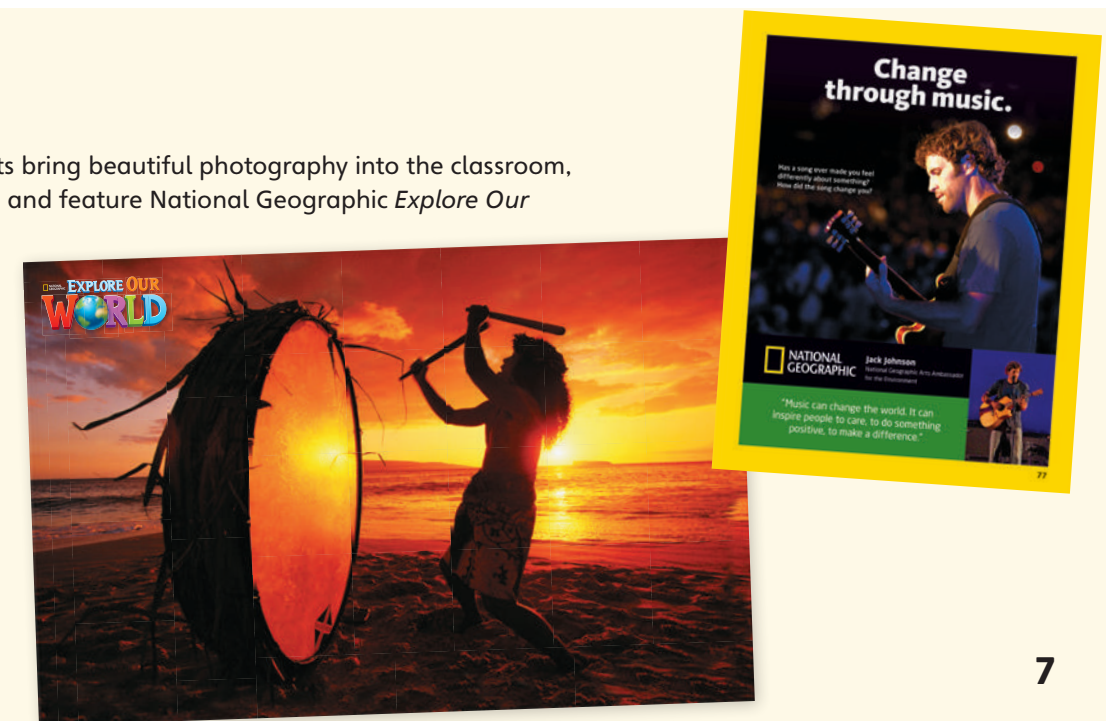
Our World Readers

The **Our World Readers** consist of six levels of original stories, classic folktales, myths, and nonfiction selections from around the globe. A graded Reader is available to support the theme and language of each unit in the Student Book. Each Reader includes additional fun facts and activities related to the story and unit theme. All Readers are available as "Story Time" in the *Our World* Video or on the **Story Time DVDs**.



Poster Sets

Eight full-color poster sets bring beautiful photography into the classroom, reinforce the unit theme, and feature National Geographic *Explore Our World* values.



EXPLORE OUR WORLD WEBSITES

Teachers and students can find student activities, Student Book and Workbook audio tracks, and other resources online at **myNGconnect**.

EXPLORE OUR WORLD VIDEO

Each **Explore Our World Video** is 30 minutes of fun-filled, fully integrated content:

- vocabulary and language presentation and review
- original songs
- games
- inspiring, real-world video
- *Our World Readers Story Time*

Presented in highly manageable 3- to 5-minute clips, *Explore Our World Video* can be used before, during, or after instruction to preview, support, and review content. *Explore Our World Videos* are available on a Video DVD and in the Classroom Presentation Tool DVD.



PROFESSIONAL DEVELOPMENT

To ensure that instructors are able to improve their classroom practice and get the most out of the *Explore Our World* series teaching resources, Dr. Joan Kang Shin, a respected trainer of young-learner teachers in over 100 countries and series editor for *Our World* and *Explore Our World*, has developed the **Our World Professional Development Program**.

Professional Development Video

Using short videos of real classrooms and interviews with teachers from around the world, the **Professional Development Video** program, available on DVD, provides useful insights and practical advice on the following topics:

- developmentally appropriate activities
- managing classrooms for effective learning
- planning successful lessons
- 21st Century skills



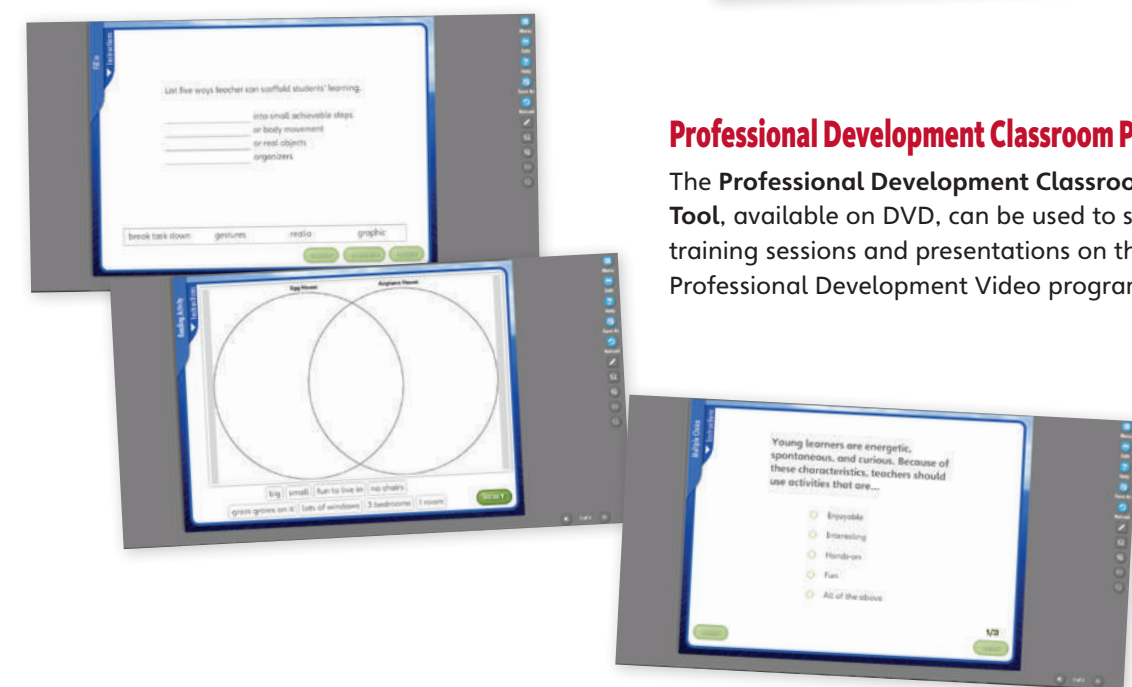
RESOURCES

Assessment Book with Audio CD

The *Explore Our World Assessment Book* provides teachers with the tools they need to place their learners within the correct level of *Explore Our World*, plan their lessons based on what students already know, and assess students' comprehension of and progress through the content of the Student Book.

Each Assessment Book includes photocopiable Quizzes, Mastery and Final Tests, as well as additional resources, including the following:

- an *Explore Our World* Placement Test and level Pre-Tests (Diagnostic Tests which help determine students' language ability)
- Listening and Speaking scripts which provide guidance for the listening and speaking portions of the quizzes and tests
- Answer Keys
- an Audio CD, with recorded scripts for all of the quizzes and tests



Professional Development Classroom Presentation Tool

The **Professional Development Classroom Presentation Tool**, available on DVD, can be used to support formal training sessions and presentations on the topics in the Professional Development Video program.

TEACHING WITH EXPLORE OUR WORLD

Our World Philosophy

The *Our World* series reflects key concepts and principles of English language teaching and learning.

- Students learn through a process of constructing meaning. They are active learners who try to make sense of their world through interaction in personal, social, and academic contexts. As they do, they gradually modify their understanding of how both the world and language work.

- Activities designed for young learners must provide multiple opportunities for understanding and construction of meaning at a level appropriate to the emotional and intellectual stages of the students' development.

- Students learn effectively when they are challenged just one step beyond their current stages of cognitive and language development. They most often need support from a knowledgeable person at this time to successfully understand and incorporate new information.

- Goal-oriented learning contributes to young learners' success. In addition to the larger goals of educating children to be responsible global citizens in the 21st century and to be knowledgeable and caring stewards of our planet, providing explicit language-learning goals helps learners understand the purpose of the activities they carry out. Young learners then have the opportunity to compare their outcomes to the original goals, important in judging their own progress.

- Learning about the world through theme-based teaching benefits young learners. Different topics provide informational structure and a meaningful basis for exploration through a variety of language learning tasks.

- Addressing the needs of the whole child in the language class includes attention to learning styles, learning strategies, critical thinking skills, 21st Century skills, and universal cultural values.

- In order to accurately evaluate progress, assessment of young learners must go beyond traditional paper-and-pencil tests. Multiple opportunities for concept checking and performance assessment provide different ways to determine students' depth of learning. Young learners also benefit from peer- and self-assessment.

Explore Our World Content

Global Citizenship

To empower young learners for the 21st century, teachers of English as a foreign language must understand the global importance of English as well as what it means to be a global citizen. It is widely recognized that English is the world's *lingua franca*. English is used internationally as the language for science, technology, business, trade, tourism, diplomacy, and global problem solving. Today's children will grow up communicating in English with people from countries all around the world.

Explore Our World uses real-world and multicultural content to help young learners grow up to become successful global citizens. Dramatic photos from around the world spark their curiosity and broaden their perspective by teaching them about the planet and different cultures. Through images and content, young learners explore other people, places, and societies and learn to care about our fascinating and ever-changing world. Their increased understanding of the world and their ability to communicate in English across cultures will prepare them to actively and successfully participate in the world of the future.

Multicultural Materials

When teaching English as a global language, it's important to bring materials that represent different cultures into the classroom. Students are very open to learning about other cultures. It only makes sense to take advantage of their natural curiosity and openness by exposing them to different customs, traditions, and ways of life.

Explore Our World incorporates content from other cultures in every unit. For example, in the Level 6 unit called "Arts Lost and Found," students learn about different traditions and art forms from other cultures, including storytelling through dance in Laos, cloth weaving in Ghana, and the 2000-year-old Chinese tradition of dragon-boat racing.

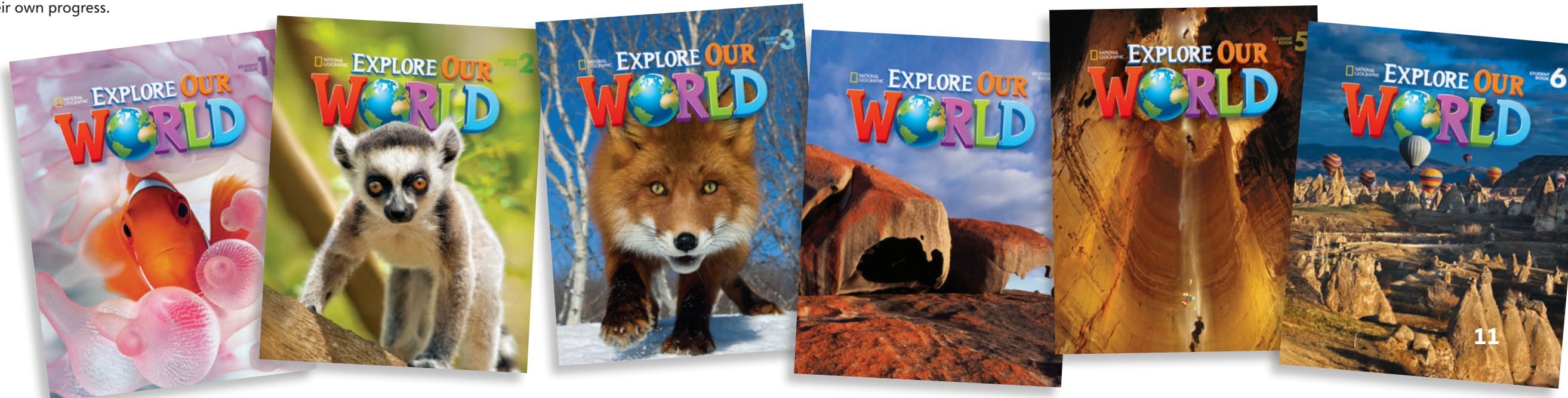
Cultural Connections

It's also important to connect young learners to their home cultures in the English-language classroom. Making connections to the local culture will help young learners relate to the content and build a stronger understanding of themselves and their place in the world. In addition, learning to express aspects of their own culture in English is another step toward effectively using English as a global language. *Explore Our World* helps young learners appreciate their own cultures and encourages them to keep their cultures strong.

Global Values

Each unit in *Explore Our World* has a National Geographic page that connects to the real-world content presented in the unit. These pages promote universally recognized values for students such as loving your family, being a good sport, and taking care of others. For example, in the Level 2 unit called "Awesome Animals," the National Geographic Values page teaches students to respect animals.

In upper levels, the National Geographic page is titled "Mission," and it highlights the work and words of a real-life National Geographic explorer. These explorers, including Aparajita Datta and Elizabeth Kapu'uwailani Lindsey, are from different parts of the world and contribute to the betterment of our planet.



Learning English through “Real-World” Content

The *Our World*, including *Explore Our World*, series takes into account current research and approaches in teaching language to young learners. Students learn language and content at the same time, so it’s natural and authentic to incorporate academic content into the English-language classroom. Integrating content from different areas such as art, science, and social studies makes language learning more interesting and engaging. It will also help prepare young learners who may eventually study these subjects in English.

Contextualizing language instruction by integrating it with other learning provides opportunities to reinforce in English the academic skills and knowledge learned in other classes. A framework for this type of lesson should include four stages:

- **Processing text**

This includes the use of texts that incorporate visual and text-structure markers such as headings and subheadings as well as features such as bold or italic text for emphasis.

- **Identification and organization of knowledge**

This includes the use of graphic organizers such as tree diagrams, time lines, flowcharts, and tables.

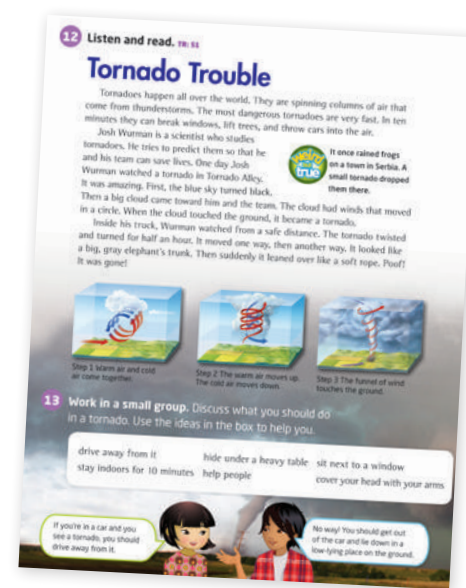
- **Language identification**

This includes the use of language features that help students to reproduce core content knowledge in their own words including the language of comparison and contrast, cause and effect, and speculation; it also includes features such as collocations, subject-specific vocabulary, and academic vocabulary.

- **Tasks for students**

This includes the use of a variety of learner-appropriate tasks, both receptive and productive. *Explore Our World* uses subject-area content as the basis for motivating students to learn English and to support what they are learning in other areas of their curriculum. Each unit has a Reading page that integrates real-world content from various subject areas and teaches academic skills. For example, the Level 5 unit “Good Idea!” focuses on language about inventions and problem solving. The topic is introduced in the context

of specific world-changing inventions, such as the wheel and the airplane, but the unit vocabulary ties the theme to the everyday world with words about creativity, including *problem*, *imagination*, *idea*, *solution*, *try*, *fail*, and *succeed*. The reading content, “Creative Kids,” introduces three young people who invented things that are practical and in use today the world over. This motivating piece uses real-world content to highlight the creative potential in every student.



21st Century Skills

Today’s students are growing up in an interconnected world. As English language teachers, our job is to help them become responsible global citizens and leaders of the future. The Framework for 21st-Century Learning deals with “the skills, knowledge, and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise, and literacies.” These skills can be categorized in four ways:

- **Ways of working**

Students need to be able to communicate clearly and collaborate effectively. *Explore Our World* helps students use the vocabulary and language structures they are learning to both communicate about real-world content and collaborate on activities and projects that allow them to apply the English they are acquiring in meaningful ways.

- **Ways of thinking**

Students also need to think creatively and critically. They need opportunities to learn how to make decisions and solve problems. *Explore Our World* challenges them to practice both these skills. For example, in Level 5 students learn about preparing for extreme weather and discuss the importance of protecting the oceans. In Level 6, students explore plant behaviors and adaptations, discuss how people in their community can reduce their human footprint, and learn about ancient civilizations.

- **Tools for working**

English students today aren’t just learning English. They are preparing to enter a competitive global workforce. In order to be ready for the future, they need to be able to navigate technology and to extract information from many forms of media. They also need to acquire technology literacy, information literacy, and visual literacy. All of these needs are addressed in the *Explore Our World* Student Books, comprehensive video program, and interactive technology.

- **Skills for living in the world**

It’s critically important for students to develop awareness of the skills and qualities that will help them achieve success in their future lives and careers. In *Explore Our World*, young learners are introduced in age-appropriate ways to concepts such as openness to new ideas and experiences, adaptability, and initiative. They learn about 21st-century professions, such as crisis mapper, and National Geographic Explorers are presented as potential role models.

Living in the world also encompasses the idea of personal and social responsibility. On a personal level, younger *Explore Our World* students learn about taking care of themselves and other beings. Older students discuss how they as individuals can make changes or adopt new behaviors for the greater good.

On a social level, students explore ways of connecting to their local community such as exploring where they live and participating in local events. As local citizens, older students interact with their community through activities such as planning and executing events to protect the environment, conducting interviews, and creating a local brochure for tourists.

Personal and social responsibility play a large part in students’ preparation for global citizenship as well. Students must commit to developing intercultural competence by building their knowledge of global cultures, by acquiring skills that enhance their interactions, and by refining their attitudes regarding cultural differences and customs. They must be willing to see the world from other points of view and to understand and respect cultural behaviors that are different from their own.

Throughout *Explore Our World*, young learners are introduced to people, places, and cultures from around the world. At the same time students are learning to recognize cultural similarities and appreciate differences, they are also encouraged to express their own culture in English as a first step to building their intercultural awareness and competence. In short, *Explore Our World* prepares students to be curious, engaged, and well-informed citizens of the 21st century.

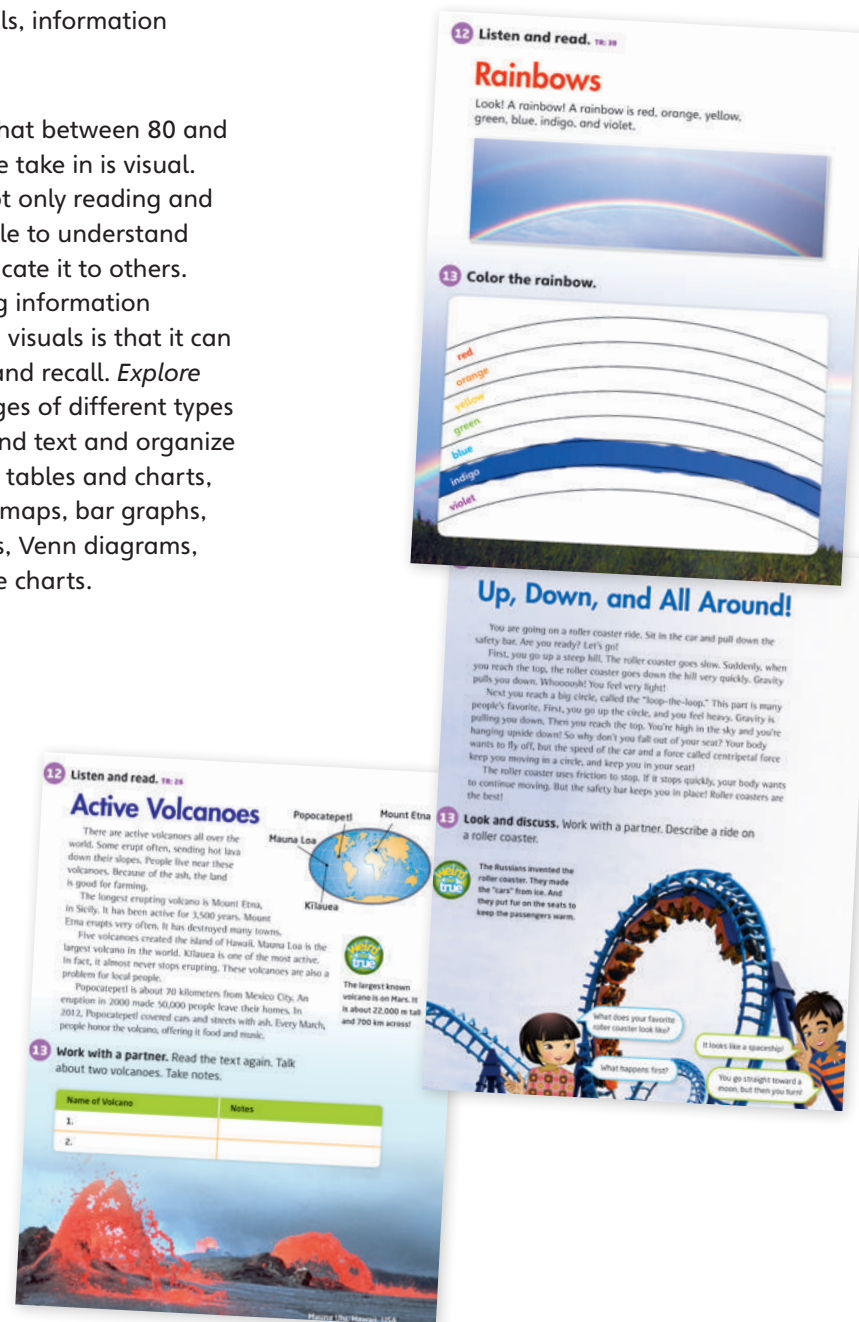


Visual Literacy

Visual literacy is a necessary skill for the 21st century, which is increasingly image-, media-, and technology-driven. In the past, the term *literacy* referred to being able to read and write, but today it includes the interpretation of various kinds of texts in print and media. Visual literacy is the ability to construct meaning from images such as photos, illustrations, graphic organizers, signs, symbols, information graphics, and video.

Brain-based research shows that between 80 and 90 percent of the information we take in is visual. Learning a language, then, is not only reading and writing words; it is also being able to understand visual information and communicate it to others. An additional benefit of learning information simultaneously through text and visuals is that it can dramatically improve retention and recall. *Explore Our World* uses a variety of images of different types to help young learners understand text and organize information; some examples are tables and charts, diagrams, mind maps, T-charts, maps, bar graphs, calendars, time lines, line graphs, Venn diagrams, cause-and-effect arrows, and pie charts.

National Geographic has the most impressive and highest quality collection of photos and video in the world. These visuals enrich the *Explore Our World* print, video, and media components. These materials help young learners become visually literate through imagery that reflects print and media in the real world. This will further help them to succeed as 21st-century citizens.



Video and Technology

Video is a powerful tool that can bring the world into the classroom and the classroom to life. In learning language, video can be especially valuable because it can provide a real-world context that helps students experience the language in a natural and dynamic way. This will help them better understand how to use the language, and it makes learning more fun. The videos in *Explore Our World* are divided into short, manageable clips that present the following:

- **vocabulary** through amazing photos
- **grammar** in animated contexts
- **songs** performed by fun hosts
- **video** clips that give examples of real-world communication
- **stories** read by the hosts using images from the *Our World Readers*

Explore Our World Video is flexible. For example, lessons can be presented from the Student Book first, and then followed by the corresponding segment in the video to review and check comprehension. Or the video can be used to present the language and then the Student Book can be used to review and practice. Either way, using the video helps contextualize language instruction and engage children in the classroom in fun and meaningful ways.

The **Classroom Presentation Tool** allows the introduction of many types of content, including video, audio, and interactive activities into the classroom using either an interactive whiteboard or a computer with a projector. Learning becomes more active and interactive using this digital classroom tool.

For example, young learners love games, and the *Classroom Presentation Tool* includes games that present and practice the Student Book lessons in new and unique ways. These activities allow for teaching and reteaching that will engage the whole class. With these games, students have opportunities to predict, to think critically, to work in teams, to sing along, and to use English in a safe and motivating environment that sets them up for success.

The computer is an excellent resource for English language learning and teaching. *Explore Our World Student Activities*, online and on CD-ROMs, encourage language practice through fun game environments that will entertain, inform, and motivate students. For example, they will play soccer against **meerkats**, puffer fish, polar bears, pigeons, mountain goats, and even alligators. They'll clean up the ocean, feed chameleons, solve puzzles, and explore mysterious mazes, all while practicing and playing with English.

Interactive media provide a richer environment for learning and engage young learners in the ways they are used to learning, getting information, and entertaining themselves. More importantly, building students' media and digital literacy skills helps prepare them to use English in the real world in the 21st century.



Characteristics of Young Learners

In order to teach young learners successfully, it is important to understand how students develop and how they learn. Effective materials reflect gradual growth in ability in the areas of gross and fine motor skills, language, cognition, and socialization. Students of different ages have different levels of development, and it is important that teachers use methods and activities that are appropriate for their students' abilities.

In general, students are very energetic and spontaneous. They do not like to sit still for long periods of time and they have short attention spans. Although they can be easily distracted, they are very curious and will pay attention if the topic is interesting or if the activity is fun and engaging. Although these characteristics can make teaching young learners challenging and even difficult at times, they can also make the young learner classroom joyful and rewarding. *Explore Our World* keeps learners active and engaged by using developmentally appropriate activities that cater to their learning profiles.

Learning Styles

Young learners tend to process information about the world primarily through their senses. The sensory learning styles are visual, auditory, tactile, and kinesthetic.

• Visual learners

Visual learners notice the details of their surroundings and use color, shape, and position to help them learn and remember information. They understand instructions for activities much better when they are shown what to do rather than told what to do. Visual learners respond well to board work and to activities involving photos, drawings, flash cards, posters, video, arts and crafts, murals, projects, puzzles, and board games.

• Auditory learners

These students learn and remember information through sound and rhythm. They can memorize information easily and repeat back the text of stories, role plays, and song lyrics after one or two listenings. They understand oral directions for activities and often agree to act them out or repeat them for other students. They do well with listening and pronunciation activities, and they enjoy discussions, sound tracks, video and computer games, songs, and chants.

• Tactile learners

As the word *tactile* indicates, these learners use touch and the manipulation of objects to help them process and remember information. They depend on their physical and material surroundings. For example, when they are trying to concentrate, they may flip pencils or play with their hair. To understand instructions, they need to see, hear, and physically carry them out. Tactile learners do well with arts and crafts, flash cards, puzzles, board games, and realia.

• Kinesthetic learners

These students process and remember information through physical movement. Like tactile learners, they also touch and manipulate objects, and they are good at working with their hands. They understand directions for activities much better when they can see, hear, and physically carry them out. They need to release tension through movement and will look for ways to do so—going to the pencil sharpener or trash basket several times, for example. Kinesthetic learners do well with Total Physical Response (TPR) activities, charades, role plays, puzzles, and board games.



Skills and Strategies

Learning Strategies

Strategies are generally defined as behaviors that learners use to understand and complete a task. Learning strategies and their use and instruction can benefit young learners as well as adults. As described by Ana Chamot and Michael O'Malley, these strategies fall into three categories: metacognitive, cognitive, and social-affective:

- Metacognition is “thinking about thinking.” For young learners, this means helping them plan before doing a task. They need to think about the purpose of the task, what information is most important, how they will use the information, what the best way to do the task is, and how much they understand about the task.

- Cognitive strategies include accessing prior knowledge about a topic, seeing how new information connects to the material the student already knows, identifying where more information could be accessed, thinking of good ways to organize the material, and identifying ways to remember the new information.

- Social-affective strategies are especially useful in language classes, as language is social by nature. While using English, young learners can ask for explanations from teachers and classmates, find out how and when they can ask for help, discuss how they can work together with classmates, and how they can get and give feedback.

Critical Thinking Skills

Critical thinking is a higher order of thought that involves analyzing, evaluating, and synthesizing information. In many young learner classrooms, teachers' questions may be limited to basic comprehension questions (What is the story about? Is it a happy or sad story?) and to display questions (How many planets are there in our solar system? Is the moon hot or cold?). Even though children's analytical abilities

are not yet fully developed, teachers can nevertheless design age-appropriate questions that go beyond the surface and require deeper processing on their students' part. Ask questions that bring into play the following skills:

- **classifying** What are (two) ways you can group together these words?
- **comparing** How are (dogs) and (wolves) alike?
- **contrasting** How are the (cassowary) and (ostrich) different?
- **getting meaning** What clues in this sentence help with the meaning of the word (*ground*)?
- **inferencing** Looking at these effects, what do you think is the cause?
- **predicting** What will happen when (the volcano erupts)?
- **problem solving** What are some ways we can (conserve water at school)?
- **ranking** How would you list your (favorite sports) from one to five?
- **sequencing** When (planting vegetables), what are the steps in order?
- **using graphic organizers** How could you use a graphic organizer to map out the ideas in this reading?
- **visualizing** How do you picture (the treasure) in your mind?

Creating Successful Lessons

Effective teaching begins with a lesson plan. A lesson is like a long road trip that requires a map: The final destination or goal cannot be reached without carefully planning each stop along the way. These steps help learners reach the lesson objectives successfully, which is the final destination of the trip teachers and students are taking together.

A good lesson plan has many benefits. It helps teachers prepare for class, including gathering or creating the materials needed to make the activities successful. It lays out step-by-step instructions that provide a guide for every moment in class. But most importantly, it requires teachers to define objectives for the lesson and plan activities in a sequence that will ensure student success.

Stages of a Lesson

Explore Our World uses five steps recognized as standard practice for effective language instruction: Warm-up, Presentation, Practice, Application, and Wrap-up.

• Warm-up

These activities help English language learners switch from their native language to English, remember material from earlier lessons, and begin class feeling confident about what they know. Warm-ups create interest and excitement about the topic and prepare learners for the new language input. This new input can be vocabulary, grammar structures, or language functions. Warming up students can involve activating students' prior knowledge of the topic or context as well as reviewing known language that will be used or recycled in the unit. By helping students see what they already know and connecting the new language to their previous experience, warm-ups prepare them to learn.

• Presentation

After students are warmed up, it's time to present the new language. This means teaching new vocabulary words or new grammatical structures through visuals, realia, examples, or the context of a song or story. Teachers should take time on this step and provide numerous activities to give lots of meaningful listening and reading input. This will help students gain comprehension of the new language. Use a number of activities that require the four skills (Listening, Speaking, Reading, Writing) to check students' comprehension. For example, use concept checking to see if students know the word *bakery* by asking questions such as *Can I buy a bike in a bakery? What can I buy in a bakery? Give me an example of a bakery near here.* Or have students draw a bakery and write a few lines about what they do and buy in a bakery. The *Explore Our World* Lesson Planner suggests multiple activities to present and check comprehension of language to support the activities in the Student Book.

• Practice

As an important step in the process of learning, practice focuses on students' first efforts to use the new language. For young learners, especially beginners, the practice is guided, meaning that the students are given the structures and vocabulary needed to produce the language; they are not yet expected to create the language independently. Of course, the goal is to give learners plenty of opportunities to try out the new language in order to prepare them for real communicative contexts. The Lesson Planner provides suggestions for giving additional support or guidance for the practice stage.

• Application

Applying the new language in a communicative context is a natural step after practice because it encourages students to act more independently with the language they have practiced previously with more guidance and support. At this stage, students should be able to use the new language in a realistic context and to personalize the language with respect to their own lives. Application further develops students' abilities to use language communicatively. The *Explore Our World* Student Books have application activities for each vocabulary and grammar section that encourage students to communicate with each other and apply the language to their lives. The Lesson Planner provides suggestions to help teachers carry out the application activities successfully.

• Wrap-up

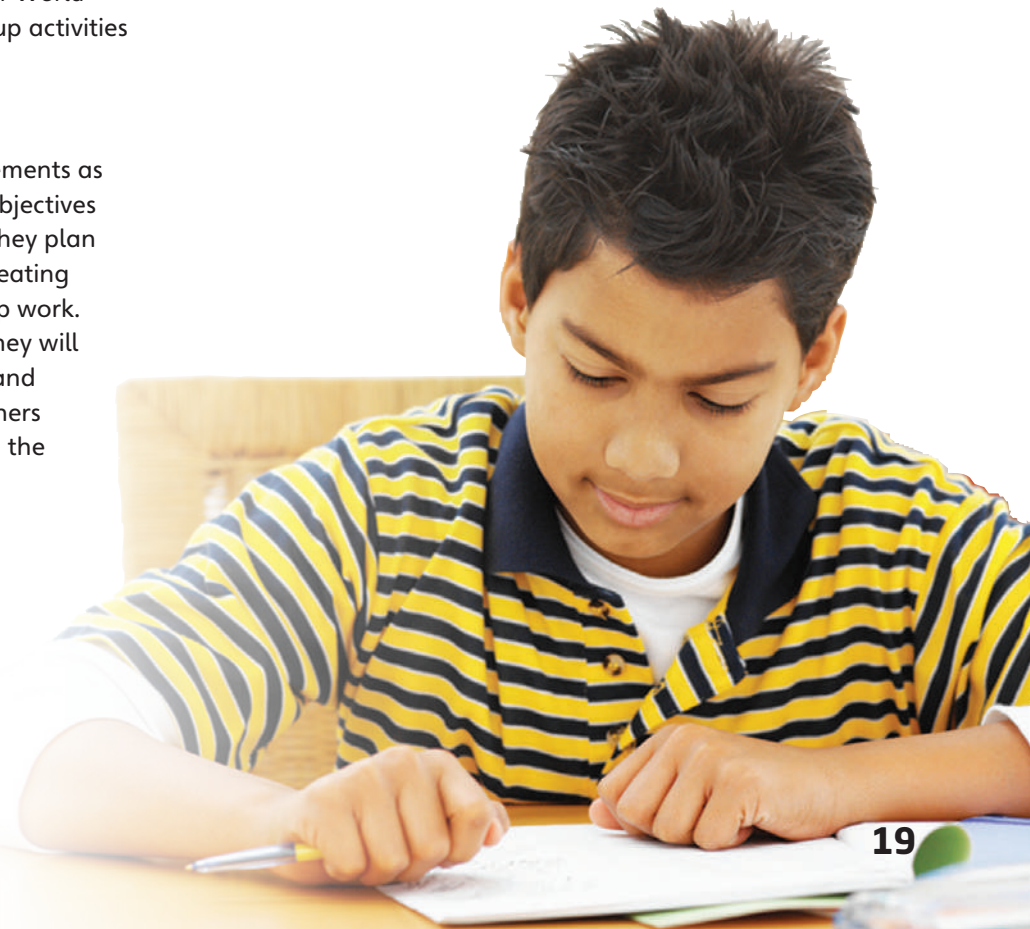
Concluding a lesson or class with a final activity is always important, as students need to leave the class knowing that they have completed an activity and learned something. This might be a review of what was learned in class in a game to check comprehension of vocabulary words, or it might be a song or chant. The wrap-up might be a conclusion to a pair-work activity in which the teacher asks individual students what they learned from their partners. The *Explore Our World* Lesson Planner provides appropriate wrap-up activities for each class.

Lesson Adjustments

Teachers keep in mind many different elements as they plan their lessons. They identify their objectives and match appropriate activities to them. They plan how they will use their physical space and seating arrangements for individual, pair, and group work. They collect the materials and equipment they will need. They think about time management and pacing. But no matter what they plan, teachers know they should expect the unexpected as the day's lesson unfolds.

In a classroom full of young learners, there are many factors teachers cannot control. Successful teachers learn to be creative so that they can adapt to unplanned events, whether they be a surprise fire drill, an equipment failure, or unexpected student behaviors. This includes adjusting instruction based on students' unique personalities, their mood swings, their varied interests, and their diverse personal, cognitive, and emotional needs.

In mixed-ability classes, for example, teachers spend more time with some students than with others. When this is the case, they have ready a number of activities for the rest of the class to do. These may include starting homework in class or choosing something from an activity box that includes worksheets, puzzles, board games, vocabulary cards, comic books, and class-produced books. In the *Explore Our World* Lesson Planner, teachers have different activities to choose from, including extension activity suggestions that are not in the Student Book. In addition, there are many additional activities and games in the Classroom Presentation Tool, the CD-ROM, and the video.



Successful Activities

- **Activities have meaning and purpose.**

Activities for young learners should above all be meaningful and purposeful.

Engaging students in authentic and meaningful contexts helps them recognize and remember language patterns. As Lynn Cameron (2003) wrote, “Children see the foreign language ‘from the inside’ and try to find meaning in how the language is used in action, in interaction, and with intention, rather than ‘from the outside’ as a system and form.” So, instead of presenting language as isolated grammar structures to be analyzed, teachers do well to present language in meaningful contexts. They make sure to provide plenty of opportunities for students to practice the language through both repetition and recycling, and to give students a real purpose to communicate with each other in English.

- **Activities are supported and scaffolded.**

Scaffolding is used to describe the exterior support structure around a building under construction. When the building is finished, the scaffolding is taken away and the building stands on its own. In the same way, teachers have to provide scaffolding to students in order to help them construct knowledge and learn language effectively. *Explore Our World* sets students up for success by supporting and scaffolding the learning process. It is important to break tasks down into small, achievable steps and give students a model to follow. *Explore Our World* teaches language step-by-step, but the teacher still needs to take the time to make sure students have plenty of ways to show their comprehension of the new language.

- **Activities are active and hands-on.**

Explore Our World materials promote the active and hands-on classroom. Because students are kinesthetic learners and like to move their bodies and move around the room, it is important to keep instruction physically active. Students also like to learn by touching and manipulating objects. In other words, students learn by doing. They need to be active and have many hands-on activities that encourage them to interact with objects and visuals. If possible, bring in real-world objects and incorporate projects that allow students to produce their own creations that further the learning process. Doing artwork, crafts, posters, and projects are great ways for learners to be active and make things with their own two hands.

- **Activities are enjoyable and interesting.**

To teach young learners effectively, language classes need to be enjoyable and interesting. The photographs and artwork in *Explore Our World* will capture students’ attention and interest. The units are full of activities that young learners find fun and engaging such as singing songs, listening to stories, and playing games. There is a song in each unit, as well as games, pair work, and group work that will keep young learners’ interest. In addition, the Video program and the Classroom Presentation Tool contain a wide variety of motivating and enjoyable activities.

Repetition and Recycling

Teachers should provide plenty of opportunities to practice the language. Using repetition and recycling is important when working with young learners. Luckily, if there is a fun song, students will ask to sing it again. If there is an interesting story, they will ask to hear it again. Repeating is a natural part of students’ learning process. *Explore Our World* provides plenty of opportunities for meaningful repetition, especially if the video program and/or Classroom Presentation Tool is used in conjunction with the Student Book. Students will get the chance to hear, repeat, and use both vocabulary and grammar multiple times.

Recycling is also important to improve young learners’ ability to understand the new language structures and use them correctly. *Recycling* means “to use again.” When teachers recycle language, they use it again in another context. Within a unit, the new vocabulary is constantly recycled and used in different contexts in the song, the grammar activities and games, and the Reader and storytelling activities.

Explore Our World also recycles language from unit to unit and level to level. For example, in one lesson students may learn vocabulary for different clothes. A teacher may recycle this language by teaching about the weather and asking students what to wear when it is hot and sunny or when it is cold and rainy. Recycling helps students increase their proficiency by getting them to use the language in a new context. This makes the learning process more authentic and meaningful.

Classroom Management

As teachers everywhere know, real learning requires a well-managed classroom. Teachers of young learners need to develop a plan for managing their own classrooms that will keep students engaged and on task. At the same time, teachers should avoid giving students opportunities to get distracted or out of control. Expectations of proper classroom behavior can vary from culture to culture, but in all cases, effective classroom management goes beyond dealing with misbehavior.

Many aspects of teaching can affect the behavior of students in the classroom.

- **Time**

Effective teachers use their class time carefully. They plan the time it takes to greet students and start the class, the duration of each activity, the time spent between activities, the time it takes for student breaks, and the time it takes to assign homework at the end of class. They also reserve five minutes or so as extra time to be used as needed during the class. In addition, they keep in mind what is known as “wait time,” the amount of time the teacher waits for a student to answer a question. Some teachers count to ten slowly and silently, while others use a watch to allow from three to five seconds. This helps students formulate better quality responses.

- **Activities and transitions**

It is important to have ready all the materials needed for each activity before class so that young learners don’t have time to get restless. Activity directions are another area that can require advance planning. To keep students’ attention, it is a good idea to read all activity directions before class so that there is time to simplify and provide options as necessary.

Moving smoothly from one activity to another requires planning transitions. For the youngest learners, this could be a clapping chant (*We are done/That was fun/Now let’s do/Another one*), visual cues such as a teacher-held stop sign or flipping the light switch on and off three times, or auditory cues such as a whistle or bell. If the previous activity has involved movement, a useful transition to the next activity can be having students close their eyes and rest their heads on their hands for a minute. If the previous activity has been concentrated

seat work, a useful transition to the next activity can be having students stand by their desks and “shake out” their hands and legs, or having them jump up and down a few times. For older learners, transitions that link two activities can be language-based. For example, if students have just read about someone’s activities last weekend, a teacher may say *We just read what (David) did last weekend; now we’re going to listen to find out what he’s doing next weekend.*

- **Classroom rules**

The establishment of rules in the young learner classroom is particularly important because students need rules to function successfully. Teachers need to communicate these rules clearly and simply, and make sure they consistently enforce them with age-appropriate rewards and sanctions. When possible, allow students to help create the rules and consequences. The teacher and students may come up with rules such as *Be quiet when someone is talking, Raise your hand to talk, Be kind to others, Work hard, Share, and Cooperate.* Display the rules on a poster on the classroom wall or provide each student with a copy to keep in their notebooks.

- **Classroom routines**

Equally important is the establishment of predictable routines. Young learners feel secure when they know what to expect during different stages of the lesson. Routines help them get organized and prepare to learn in English. Common routines include starting the class with a greeting, designating the day’s classroom helpers, taking attendance, naming the day and date, establishing objectives, checking homework, dividing the class into pairs or groups, cleaning up the room, assigning homework, and ending the class.

- **Classroom atmosphere**

Effective teachers take care to build a fair, safe, and supportive classroom climate. As supportive adults rather than friends, they aim for positive relationships with all their students and consciously avoid favoritism. They have high but reasonable expectations and model the values they hope to inspire in their students—kindness, patience, fairness, and respect.

The 4 Skills: Listening, Speaking, Reading, and Writing

Explore Our World provides multiple opportunities for young learners to develop all four skills in a balanced and age-appropriate way.

Listening

Young learners learn about other people and the world around them primarily through oral interaction. In the classroom, they benefit from multiple opportunities to listen to and practice routine language, vocabulary, basic structures, and patterns. And while practicing listening and speaking together is very important, so is a focus on listening-only activities. Some of these activities develop students' ability to discriminate sounds, words, and sentence boundaries, while others focus on stress, rhythm, and intonation. Songs, chants, and poems are a natural and fun way to practice, too. The Workbook includes a variety of listening activities as well.

In addition, students need practice with basic listening strategies such as listening for the main idea and listening for details. Older learners can listen for sequence (*first, next, then, finally*), for time frames (verb forms signaling present, past, or future time), and for cause and effect (*why, because*), among other details.

Speaking

Listening and speaking interactions are the communicative foundation for language learning. Question-and-answer exchanges, whether between teacher and student or between student and student, play an important role in the classroom. At first, young learners will rely on modeled language in their exchanges, but it is also important to introduce opportunities for personalized, authentic language use as soon as possible. Gradually move away from display questions (to which students provide already known answers in order to show their comprehension) such as *What color is your hair?* and *How many students are in our class?* to authentic communication (questions to which the answers are not yet known) such as *Do*

you have any pets? and *Did you play soccer today?* Other speaking opportunities include games, group discussions, and project presentations. The more relevant the language is to learners' lives, the more meaningful and memorable it becomes.

In addition to working on the pronunciation of whole words and sentences, it can be very useful to spend time practicing individual sounds, especially those sounds students find particularly difficult. The Sounds of English lessons focus on known words with a target sound in the initial position and eventually include words with the sound in the medial and final positions. Fun Sounds of English activities in every unit provide additional opportunities for students to listen to and practice individual sounds.

Explore Our World provides many different speaking models including work with Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) in Student Books 4–6 on the pages titled *Let's Talk*. In addition, students gain valuable practice with rhythm, stress, and intonation in songs and chants, and with pronunciation and sound discrimination using The Sounds of English Cards. The Workbook includes different speaking activities as well.

Reading

A unique feature of the *Explore Our World* series is the use of engaging content from the world-renowned National Geographic archives. Children are naturally curious about the world around them and will enjoy reading about copycat animals, chocolate, flesh-eating plants, extreme sports, and other interesting topics. Readings are age-appropriate and provide basic practice in reading strategies such as identifying the main idea, finding details and examples, figuring out meaning from context, and relating texts to graphic organizers.

The Lesson Planner includes a variety of before-, during-, and after-reading tasks that draw students deeper into texts. Before-reading activities prepare learners for the reading by drawing their attention to titles, headings, photos, and captions; by accessing what they already know about the topic; and by predicting what the reading might include.

During reading, it is useful to train students to ask themselves silent questions such as *Who, When, Where, What, Why, and How* and find the answers as they go. They can also underline or highlight information as they read or make brief comments in the margin.

After-reading activities include comprehension questions, but they also include questions that require higher-order thinking, questions that require learners to support their ideas and opinions, as well as the use of summaries, and graphic organizers. Additional readings are found in the Workbook.

In addition, eight *Our World* Readers accompany each of the six levels. These readers are age-appropriate and are designed so that they may be read independently, either in class or at home. Each Reader is thematically related to the corresponding Student Book unit and contains some of the unit target grammar and vocabulary. Texts are an entertaining and informative mix of fiction and nonfiction.

Writing

Younger learners are systematically introduced to writing beginning in Workbook 1, where they work at the word level, gradually move into sentence

stems, and finally to one–three simple sentences. Students draw and then write about their drawings. In Workbook 2, young learners are guided to organize and write short paragraphs through answering specific questions. In Workbook 3, students learn about compound sentences, descriptive words, the parts of a paragraph, complex sentences with *because*, and sequence words. In Levels 1 through 3, a page in each Workbook unit provides additional writing practice.

In Workbooks 4 through 6, older learners are introduced to the concept of paragraph unity and to different writing genres such as journal entries, blogs, reviews, and paragraphs of opinion, cause and effect, contrast, comparison, exemplification, fact and opinion, persuasion, classification, and more. Students are guided step-by-step in the Workbook for each writing assignment.

A complete model is provided for each writing task in the Workbook, so that learners have clear, meaningful examples of what they are expected to do. Additional writing worksheets are available on the Teacher's Resource CD-ROM. In Levels 1–3, worksheets expand on Workbook writing content, while in Levels 4–6 students are introduced to Process Writing.

12 Listen and read. 12. 15

Wonderful Work!

Annie Griffiths is a photographer. She travels all over the world for her work. She takes photographs of people at work and people having fun. She also takes photos of cute animals and some very scary animals. Annie wants all her photos to tell a story. She wants people to think about them.

13 Work with a partner. Talk. Today you are a photographer. What do you want to photograph?

I want to take pictures of the mountains.

I want to take a picture of my family.

11 Listen and read. 11. 16

Colorful Corals

Corals look like a colorful garden under the water. But corals are not plants! They're animals.

What's for dinner? Each coral is made up of small animals called polyps. Polyps have a mouth, stomach, and tentacles to catch food. Many polyps live in the sunlit zone, where they eat small plants called algae.

What's a coral reef? Most corals live together. As old corals die, new polyps grow on top. That's how you get a coral reef. Some coral reefs are millions of years old, and they're home to more than 4,000 kinds of fish!

Save the reefs! Coral reefs are amazing resources. They're important for tourism and jobs. Scientists use reef animals to make new medicines and other products. Coral reefs are a source of food, too. But coral reefs are in danger. Because of pollution, many coral reefs are disappearing. Some people say that only 30 percent of the world's corals will exist in the year 2050. We must protect our corals now.

12 Work with a partner. What did you learn? Ask and answer.

The Great Barrier Reef is over 2,300 km (1,440 mi) long! You can see it from outer space!

10

How Quetzalcoatl Brought Chocolate to the People

An Aztec legend

Retold by Lynn Mesh

Vocabulary

Explore Our World helps develop vocabulary through a variety of activities that encourage communication. The target vocabulary items in each unit are presented in thematically related, meaningful contexts, and then recycled several times in different activities and in different components. Active vocabulary consists of words necessary to understand and talk about the unit theme as well as high-frequency, high-utility items used in real communication relevant to the world of the student.

For younger learners, many items are related to concepts they are exploring in their first language such as colors, shapes, and numbers. For older learners, vocabulary items are related to their own lives (habits, chores, likes, and dislikes), to their relationships (as family members, as friends, as members of the community), and to their studies at school (science, health, language arts, social studies, and sports).

Encourage students' active involvement in vocabulary learning through the use of pictures, flash cards, posters, arts and crafts, kinesthetic games, projects, personal dictionaries, word mobiles, and word walls. When applicable, raise learner awareness of vocabulary strategies, such as paraphrase and circumlocution ("the thing you cut paper with," for *scissors*), and familiarize students with the concept of cognates and false cognates.

To clarify meaning, encourage word associations and teach word collocations such as *have + noun: have a good time, have breakfast, have a flat tire, have a headache, have a quiz*. Have students keep vocabulary notebooks in which they write definitions, use words in sentences, develop word maps, note collocations, and build word groups (*photo, photograph, photographer, photographic, photographically*). When appropriate, raise awareness of word formation through prefixes and suffixes.

Grammar

Explore Our World presents grammar in age-appropriate, meaning-based ways. Because their analytical skills are not yet fully developed, younger learners gain little from analyzing forms and memorizing rules the way many adults do. They benefit more by seeing many repetitions of a target grammar point in different meaningful contexts and by using grammar as unanalyzed "chunks" that help them communicate. The grammar boxes in the Student Books and Workbooks, then, show target points in meaningful sentences that students can use as models for language production. As learners age and develop cognitively, they are invited to notice certain language features and think about how they function. The oldest learners can keep grammar reference notebooks in which they have a page for each grammar point with examples of form, meaning, and use. They can also record their most frequent errors and write a corrected version of each one in their notebooks.

Grammar practice in the Student Book is supported by additional activities in the Workbook, the Video program, and the Classroom Presentation Tool.



Assessment

Because of young learners' age; level of maturity; limited range of experience; and cognitive, linguistic, and literacy development, they need appropriately designed assessment tasks, whether traditional or performance-based.

- Tests should mirror learning. The material actually taught in class is what is assessed. Tests should reflect the objectives of the curriculum and provide students with the opportunity to demonstrate what they know and what they can do with the language in tasks and formats that are similar to the ones they have experienced in class.

- Tests should contribute to learning on the teacher's part as well as on the students' part. Test results should provide teachers with information on which to base subsequent instruction, especially modifications that are needed for some or all students. And, of course, the results should provide information to learners on their current strengths and weaknesses and progress in learning English.

- Tests should include a variety of techniques that correspond to learners' different intelligences and learning styles. That is to say, tests should provide opportunities for learners who are not primarily linguistically, logical-mathematically, or spatially inclined but rather demonstrate other types of intelligences or learning styles. All learners should have multiple chances to demonstrate their skills, strategies, and knowledge.

- Tests should be contextualized and reflect relevant tasks and language for young learners. Assessment items are more authentic when they reflect a previously taught theme or body of content and when the language tested is that used by young learners in class and in their real lives.

- Tests should allow all learners to experience success, while providing both lower-than-average learners and advanced learners opportunities to demonstrate their knowledge. Just as teachers deal with mixed-ability learners in class through differentiated instruction, so should they provide opportunities for mixed-ability learners on tests.

- Tests should motivate learners and build learner confidence. Teachers work hard to include a variety of motivating and fun activities in their lessons, and they are conscientious about providing praise and constructive feedback to their students in class. Students should have the same opportunities for fun, engagement, and motivating feedback in their assessments.

- Tests should take place over time in order to collect evidence of growth. Assessment should not be approached as an occasional but necessary, fear-inducing evil. Indeed, the more frequently students are assessed through a variety of ways, the less test anxiety they may have and the more practiced and confident they may feel.

The *Our World* series ensures that students engage in a wide variety of communicative activities in each thematic unit, and many of these themes and activity types are correspondingly reflected in the assessment process. *Explore Our World* provides many opportunities for both formal and informal assessment of different types.

The typical paper-and-pencil test with formats such as multiple-choice, true/false, matching, and fill-in-the-blank is one example of formal assessment. In many language curricula around the world, these task types remain popular. The *Explore Our World* assessment program includes various kinds of written tests: placement tests and level pre-tests, eight unit quizzes, two mastery tests, and final tests, together with an Audio CD for the listening and speaking components. In addition, with the use of the Assessment CD-ROM with ExamView®, all of the quizzes and tests are easily generated and customizable to the needs of each teacher's students.

Accurate assessment reflects not only what students can recognize and produce on a written test, but also what they can perform or do as they actually use the language in real or realistic contexts. *Explore Our World* therefore provides a wealth of opportunities for informal assessment. These include pair and group work, Review pages in the Student Book, Workbook activities, and the Classroom Presentation Tool, among others.

Explore Our World Level 5 Scope and Sequence

Units 1-8

Unit	Theme	Goals	Vocabulary 1	Grammar 1	Vocabulary 2	Grammar 2	Song - The Sounds of English	Reading	Mission / Explorer
1 Wonders of the Sea	the ocean sea animals ocean pollution	<ul style="list-style-type: none"> identify sea life describe characteristics of sea life talk about protecting the oceans 	disappear a dolphin a layer an octopus	a resource a sea turtle a shark a squid a whale	Express obligation/necessity with <i>must</i> and <i>have to</i> and prohibition with <i>can't</i> and <i>don't</i> <i>We have to keep the oceans clean.</i> <i>We must protect the oceans.</i> <i>You can't throw trash into the ocean.</i> <i>Don't leave food on the beach.</i>	biodegradable garbage oil spill plastic pollution	Make predictions with <i>will</i> and <i>won't</i> <i>What will happen in the future?</i> <i>Sea animals and plants will disappear.</i> <i>We won't have clean air to breathe.</i>	Song: "Protect the Seas" The Sounds of English: /ɑ:r/ as in <u>sh</u> ark Colorful Corals	Mission: Protect the oceans. Explorer: Sylvia Earle, Oceanographer, Explorer-in-Residence Quote: "With every drop of water you drink, every breath you take, you're connected to the ocean. No matter where on Earth you live. Taking care of the ocean means taking care of us."
2 Good Idea!	inventions	<ul style="list-style-type: none"> talk about inventions talk about habits in the past describe how to use an invention 	fail an idea imagination invent	an invention a problem a solution succeed try useful a wheel	Describe habits in the past with <i>used to</i> + verb <i>People used to erase writing with bread.</i> <i>We didn't use to have erasers.</i> <i>Why did people use to read by candlelight?</i>	lift move put turn use	Generalize using <i>you</i> <i>You need to have imagination to invent things.</i> <i>You should always try again if you fail.</i> <i>What do you do with this invention?</i> <i>Do you play with it?</i>	Song: "Inventions" The Sounds of English: /j/ as in <u>y</u> es Creative Kids	Mission: Use your imagination to solve problems. Explorer: Aydogan Ozcan, Electrical Engineer, Explorer Quote: "In science it's always a long train of ideas. Many succeed, but in between you often fail ... science is entirely based on curiosity."
3 That's Really Interesting!	hobbies	<ul style="list-style-type: none"> talk about hobbies and interests give information about people describe and explain a hobby 	alone an avatar collect compete a controller	enjoy a score a screen take photos together	Defining relative clauses with <i>who</i> <i>The person who has the highest score wins the game.</i> <i>My friend who collects DVDs knows a lot about movies.</i>	a bug a comic book a dinosaur a fossil a stuffed animal	Direct and indirect objects <i>My dad gave this fossil to me = My dad gave me this fossil.</i>	Song: "What's Your Hobby?" The Sounds of English: /ɔɪ/ as in <u>bo</u> y Hide and Seek	Mission: Enjoy a hobby. Explorer: Jørn Hurum, Paleontologist, Emerging Explorer Quote: "As a child, I felt very alone with my interest in fossils. Finally, at age 13, I discovered there was a museum in Norway that actually employed people to study fossils."
4 The Science of Fun	the scientific principles behind some sports and hobbies	<ul style="list-style-type: none"> identify actions which use force understand and make definitions read a text and retell the information 	backward balance fall over a force forward	happen pull push a skater spin	Cause and effect with double comparatives: <i>The more... the more...</i> <i>The more she pushes, the higher he goes.</i> <i>The higher he goes, the more he feels sick.</i>	away from direction gravity lean toward	Defining relative clauses with <i>which</i> <i>The force which pulls you toward the center of the earth is called gravity.</i> <i>Skates are special shoes which you wear when you go ice skating.</i>	Song: "I'm on the Move!" The Sounds of English: /ɒ/ as in <u>pu</u> sh Up, Down, and All Around!	Mission: Think creatively and critically. Explorer: Stephon Alexander, Theoretical Physicist, Emerging Explorer Quote: "When something unexpected or unusual happens, I am always curious to find out why."
Let's Talk Units 1-4	Wow, that's cool! Goals: <ul style="list-style-type: none"> ask questions show I'm interested keep the conversation going 					What does that mean? Goals: <ul style="list-style-type: none"> interrupt someone (formally and informally) ask the meaning and ask how to spell or say something explain a meaning and give a spelling say that I don't know 			

Unit	Theme	Goals	Vocabulary 1	Grammar 1	Vocabulary 2	Grammar 2	Song - The Sounds of English	Reading	Mission / Explorer
5 Extreme Weather	<ul style="list-style-type: none"> weather preparedness for weather emergencies 	<ul style="list-style-type: none"> talk about types of extreme weather describe the damage storms can cause identify ways to prepare for extreme weather 	a blizzard a drought evacuate a flood a hurricane lightning	a sandstorm speed a storm a tornado thunder	Future predictions with <i>going to</i> + verb <i>Is it going to rain tomorrow?</i> <i>No, it's going to snow tomorrow.</i>	an emergency a flashlight a plan (n.) a shelter supplies	Zero conditional (present tense) <i>If the weather is cold, I put on my winter coat.</i>	Song: "Bad Weather" The Sounds of English: /ð/ as in <i>weather</i>	Tornado Trouble Mission: Understand weather. Explorer: Tim Samaras Severe Storm Researcher Quote: "It all started when I was about six years old and saw that fantastic tornado in <i>The Wizard of Oz</i> ."
6 Copycat Animals	<ul style="list-style-type: none"> animal adaptations 	<ul style="list-style-type: none"> describe animal features describe how animals protect themselves talk about ways animals imitate others 	camouflage copy (v.) hunt an insect	poisonous a predator prey species a spot (n.) a stripe	Equative comparisons with <i>as</i> + adj + <i>as</i> <i>That insect is as green as a leaf.</i>	attack defend escape hide	Tag questions <i>Lightning is dangerous, isn't it?</i> <i>That frog wasn't poisonous, was it?</i>	Song: "It's a Wild World" The Sounds of English: /z/ as in <i>crazy</i>	The Copycat Dragon Mission: Protect biodiversity. Explorer: Krithi Karanth Conservation Biologist, Emerging Explorer Quote: "We need to increase people's interest and awareness about wildlife and conservation issues and reduce the general disconnect from nature."
7 Music in Our World	<ul style="list-style-type: none"> music musical instruments musical styles 	<ul style="list-style-type: none"> identify musical instruments talk about musical styles express preferences 	a band beat a concert a drum a flute a guitar a lead singer	a piano practice a saxophone a violin	Present perfect with <i>ever</i> and <i>never</i> <i>Have you ever played the piano?</i> <i>Yes, I have.</i> <i>Have you ever danced to this music?</i> <i>No, I haven't.</i>	classical hip-hop jazz pop rock	Comparisons with adverbs (<i>more/less ... than; as ... as</i>) <i>He sings more loudly than I do.</i> <i>She plays the violin better than he does.</i> <i>I play the guitar more often than my brother.</i>	Song: "Music Is Fun" The Sounds of English: /b/ as in <i>hot</i>	Listen to This! Mission: Change through music. Explorer: Jack Johnson National Geographic Arts Ambassador for the Environment Quote: "Music can change the world. It can inspire people to care, to do something positive, to make a difference."
8 Life Out There	<ul style="list-style-type: none"> the universe space exploration possibility of life in space 	<ul style="list-style-type: none"> discuss life in space discuss space exploration express an opinion 	a comet an extraterrestrial (n.) a galaxy a journey	orbit (noun and verb) a planet search (v.) a solar system space the universe	Speculation with <i>may</i> and <i>might</i> <i>I may become an astronaut, but I'm not sure.</i> <i>We will learn more about planets next year in school.</i> <i>We might find life on another planet. It's possible!</i>	an astronaut communicate (v.) a rocket a space station a spacecraft	Indefinite pronouns (<i>everyone, someone, anyone, no one</i>) <i>Did everyone see that comet?</i> <i>Does anyone want to be an astronaut?</i> <i>Someone will go to Mars one day.</i> <i>No one can see all the stars in the universe.</i>	Song: "Deep in Outer Space" The Sounds of English: /n/ as in <i>name</i>	Listening for Life Mission: Be curious. Explorer: Kevin Hand, Planetary Scientist/ Astrobiologist, Emerging Explorer Quote: "We finally have the tools and technology to answer this age-old question: Are we alone? Jupiter's moon Europa is a beautiful place to go and explore that question."
Let's Talk Units 5–8	"It's my turn." Goals: <ul style="list-style-type: none"> take turns give commands talk about who won a game 					"Who's going to take notes?" Goals: <ul style="list-style-type: none"> talk about a classroom task make a request offer to do something 			

1 hour per week

1-2 hours per week

2-3 hours per week

Week	1 hour per week	1-2 hours per week	2-3 hours per week
Week 1	Unit Opener Vocabulary I: Warm Up; Present; Practice; Apply; Wrap Up	Week 1 Unit Opener Vocabulary I: Warm Up; Present; Practice; Apply; Wrap Up	Week 1 Unit Opener Vocabulary I: Warm Up; Present; Practice; Apply; Wrap Up Review
Week 2	Grammar I: Warm Up; Present; Practice; Apply; Wrap Up Vocabulary 2: Warm Up; Present; Practice; Apply; Wrap Up	Week 2 Grammar I: Warm Up; Present; Practice; Wrap Up; Apply; Wrap Up Vocabulary 2: Warm Up; Present; Practice; Apply; Wrap Up	Week 2 Grammar I: Warm Up; Present; Practice; Apply; Wrap Up Vocabulary 2: Warm Up; Present; Practice; Apply; Wrap Up Review
Week 3	Grammar 2: Warm Up; Present; Practice; Apply; Wrap Up Song: Use the Song; Extend The Sounds of English	Week 3 Grammar 2: Warm Up; Present; Practice; Apply; Wrap Up Song: Use the Song; Extend The Sounds of English	Week 3 Grammar 2: Warm Up; Present; Practice; Apply; Wrap Up Review Song: Use the Song; Extend The Sounds of English Review
Week 4	Reading: Warm Up; Present; Practice; Apply; Wrap Up Value Assessment	Week 4 Reading: Warm Up; Present; Practice; Apply; Wrap Up Value Assessment	Week 4 Reading: Warm Up; Present; Practice; Apply; Wrap Up Value Assessment Project (optional) Song (optional)

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In This Unit

Theme This unit is about sea animals and ocean pollution.

Content Objectives

- Students will
- identify and describe kinds of sea life.
 - identify causes of ocean pollution and ways to protect the ocean.

Language Objectives

- Students will
- identify sea life.
 - describe characteristics of sea life.
 - talk about protecting the oceans.

Vocabulary

Vocabulary 1 a resource, disappear, a dolphin, a whale, a layer, an octopus, a squid, a shark, a sea turtle

Vocabulary 2 oil spill, garbage, pollution, plastic, biodegradable

Grammar

Grammar 1 talk about obligation with *must* and *have to* and prohibition with *can't* and *don't*

Grammar 2 make predictions with *will* and *won't*

Pacing Guides

L5U1
Mission Protect the oceans.

Unit Opener

Objective

- Students will
- discuss a photo.

Resources Video: Introduction; Classroom Presentation Tool: Unit Opener; Teacher's Resource CD-ROM: Home-School Connection Letter; Unit Opener Poster; World Map Poster

Materials globe (optional)

Related Vocabulary

octopus, ring, tentacle

Unit 1

Wonders of the Sea

Read and check.

Two statements are true and one is false. Check T for *True* and F for *False*.

1. An octopus has eight arms and three hearts. T F
2. The octopus lives on a beach. T F
3. An octopus can change colors. T F

4

Introduce

- **Build background** Say *The name of our next unit is "Wonders of the Sea." Sea is another word for ocean.* Show students a world map or globe and point to the Pacific Ocean. Say *This is the Pacific Ocean. It's the largest ocean in the world.* Point to all the land on the map or globe. Say *Look at all this land. Imagine putting all the land together. The Pacific Ocean is bigger than that!*
- **Activate prior knowledge** Point to the land on the map or globe again. Say *What are some animals that live on land?* Call on students to respond. Say *Now think about the ocean. What animals do you know that live in the ocean?* When students are finished naming sea animals, have them choose one animal and draw and label a picture of it.

Be the Expert

About the Photo

This photo shows a blue-ringed octopus. This kind of octopus is found in the western Pacific Ocean and in the waters off Australia. It lives close to the surface of the water. It eats mostly fish and shellfish.

This octopus is small (about 13–20 cm or 5–8 in) but deadly. It has a poisonous bite that can kill a human in minutes. There is no known cure.

The blue-ringed octopus changes colors when it is scared. When calm, it looks tan or gray with light brown spots. When the octopus is disturbed, its 50 to 60 blue rings appear and start to pulse. This pulsing is a warning signal. Like all octopuses, the blue-ringed octopus has blue blood and three hearts.

Teaching Tip

When introducing a new unit, motivate students by connecting the unit topic to students' experiences. For example, for a unit about the sea, you can ask students whether they have swum in the sea, or what animals they have seen in the water. Say *Tell me more about it.* Helping students find connections between a topic and their personal lives makes learning more significant and engaging for students.



5

- Have students share their drawings with the class and say what the word for the animal is, if they can. Have students tell what the sea animal in each drawing looks like.
- Say *Open your books to pages 4 and 5 and look at the photo.* Ask questions to encourage discussion of the photo:
 - What do you see in the photo?* (an animal, an octopus)
 - What colors do you see?* (yellow, brown, blue)
 - How many arms does the animal have?* (It has eight arms.)
 - Where do you think the animal lives?* (the sea or ocean)
- Put students in small groups. Guide students through the True/False activity on p. 4. Read item 1 aloud. Ask one of the groups if they think the statement is true or false. Confirm the correct answer. Then give groups five minutes to complete the activity. When groups are finished, read each statement and discuss the answers as a class.

Vocabulary 1

Objective

- Students will
- identify and use words related to sea life.
 - identify and use words related to protecting the oceans.

Vocabulary a resource, disappear, a dolphin, a whale, a layer, an octopus, a squid, a shark, a sea turtle

Content Vocabulary twilight

Resources Workbook pp. 4–5; Audio CD TR: A2–A3; Video: Vocabulary I; Classroom Presentation Tool: Vocabulary I; Teacher's Resource CD-ROM: Activity Worksheet I.1

1 Listen and read. TR: A2

2 Listen and repeat. TR: A3

We must protect the oceans and the seas because they are full of life. If we don't, these important resources will disappear.

Many animals live near the top of the ocean because they like the light. There is lots of food there, too. This part of the ocean is called the "sunlit zone." It goes down to about 137 m (450 ft.). **Dolphins** live here.

The middle layer of the ocean is called the "twilight zone." This is because there isn't much light. It goes down to about 1,000 m (3,300 ft.). Few animals live in this layer, but one that does live here is the **octopus**.

The bottom layer of the ocean is cold and black. It is called the "midnight zone" because the sun doesn't reach below 1,000 m (3,300 ft.). Some amazing animals live in this dark part of the ocean!



6



a dolphin

a sea turtle

a shark

an octopus

a squid

3 Work with a partner. What did you learn? Ask and answer.

What lives in the sunlit zone?

Yes. Sharks live there, too!

Fish and dolphins.

7

Be the Expert

Teaching Tip

Texts that give information often include many details that students may forget. After initial reading, provide opportunities for revisiting the text and taking notes. For example, have students reread the text at the end of the class and take notes. At the beginning of the next class, have students refer to their notes to answer questions about the text.

Formative Assessment

Can students

- identify and use words related to sea life?
Ask students questions such as *What sea animal has a shell? Where do most sea animals live? What sea animals live in the twilight zone?*
- identify and use words related to protecting the oceans?
Have students answer questions such as *What might happen if we don't protect the oceans?*

Review For additional practice, direct students to Activity Worksheet I.1.

Warm Up

- **Activate prior knowledge** Say *Today we're going to learn about some animals that live in the sea, or ocean.* Hold up a seashell. Ask *What's this?* (a shell, a seashell) *Where do you find it?* (on the beach, by the ocean) *What other things do you find by the ocean?* For students who need more support, rephrase the questions as Yes/No questions, such as *Is this a seashell?* (yes) *Do you find seashells by the ocean?* (yes)
- Ask *What do you think a shell is for?* Write students' ideas on the board. Say *Some animals have soft bodies. A hard shell protects these animals. It keeps the animal safe. What can happen if an animal loses its shell?* (It could get hurt or die.)

Present

- Say *Open your books to pages 6 and 7. Look at the picture of the animals. These animals live in the ocean.* Point to each animal, and say its name aloud. Have students repeat each name after you.
- Say *Look at the paragraphs on page 6. They give us information about the ocean.* Point to each bold word in the paragraph and in the boxes of text. Say each word aloud and have students repeat it.

Practice 1 2

- 1 Say *We're going to read and listen to information about sea life and protecting the oceans. Read the paragraphs and the words on pages 6 and 7 as you listen.* Play TR: A2.

- After playing the audio, discuss the information on pp. 6–7. Ask questions such as:
Where do many ocean creatures stay? (near the top of the water)
Which animals live in the sunlit zone? (whale, shark, dolphin, sea turtle, fish)
Which animals live in the twilight zone? (squid, octopus)
- 2 Say *Now we're going to hear words and then listen to sentences with those words. Repeat each word and sentence after you hear it.* Play TR: A3.
- Put students into four groups. Give four vocabulary words to each group. Have group members work together to write an original sentence for each of their words. Then have a person from each group read their sentences to the class.

Apply 3

- Model the dialogue on p. 7 with a student. Say *Think of questions you can ask about all the new words we learned.* Give students a sample question such as: *What animal lives in the twilight zone?*
- 3 Pair students to complete the activity. Make sure each partner gets to ask and answer questions.

Wrap Up

- Say *Let's play a guessing game. One student will think of a word we learned. Then she will give clues. Another student will try to guess the word.* Model the activity. Say *I'm thinking of a place where sunlight doesn't go. It's the deepest part of the ocean.* (midnight zone) Have students take turns.

Objectives

- Students will
 - talk about obligation with *must* and *have to*.
 - talk about prohibition with *can't* and *don't*.

Grammar talk about obligation with *must* and *have to* and prohibition with *can't* and *don't*

Academic Language *obligation, prohibition*

Resources Workbook p. 6; Audio CD TR: A4; Video: Grammar I; Classroom Presentation Tool: Grammar I

GRAMMAR TR: A4

We **have to** keep the oceans clean. We **must** protect the oceans. You **can't** throw trash into the ocean. **Don't** leave food on the beach.

	Right	Wrong
1. We must throw bags in the ocean.		✓
2. Don't leave trash in the classroom.		
3. At home, we have to go to bed late.		
4. In many schools, students can't use cell phones in class.		

5 Work in groups of three. Take turns. Talk about rules at home and at school. Use ideas and words from the list.

clean up (must)	use cell phones (can't)	go to bed (have to)	play loud music (don't)
shout (don't)	throw trash (can't)	help with chores (have to)	arrive on time (must)
help the teacher (must)	wash the dishes (have to)	put up your hand (have to / must)	talk (can't / don't)



8

Warm Up

- Activate prior knowledge** Say *We've learned about things we have to do.* Pick up a piece of trash from the floor. If there is no trash on the floor, put something there, then pick it up. Ask *Do we have to throw away trash in school?* (yes) Walk to the trash can and throw away the trash.
- Ask *What are other things we have to do at school?* Write students' answers on the board. Write the sentence frame *We have to _____.* Have students say the sentence frame aloud, filling in the blank with each answer from the board.

Present

- Say *Open your books to page 8.* Read aloud the sentences in the Grammar box or play **TR: A4**.
- Write *have to* and *must* on the board. Say *The word must is a different way to say have to. We use must and have to to talk about things that are very important to do.*
- Write *can't* and *don't* on the board. Have students say each word aloud. Say *We use can't and don't to tell about things that are not OK to do.*
- Have students brainstorm things they are not allowed to do at school, such as run in the hallways or cut in line. List these on the board. Call on students to read the rules aloud, using *can't* or *don't*.

Our World in Context

Ocean pollution has become a serious problem throughout the world. People are starting to recognize how pollution threatens the world's oceans. They understand that they must do their part to protect the seas, such as collecting trash on the beach and not pouring chemicals down drains. Many national and international laws and rules now prohibit dumping harmful materials into oceans.

Teaching Tip

Whenever possible, use visuals to help students understand what you are teaching. For example, to communicate the idea of *can't* or *don't*, show students the universal sign for *no*—the red circle with the diagonal line running from the top left to the bottom right. Tell students that when this red circle and line appear on a picture of something, the thing or activity in the picture is not allowed.

Practice 4

- Put students into groups of three or four. Assign each group one of the following: *have to*, *must*, *can't*, or *don't*. Say *Work with your group. Write two new sentences with your word. Use the sentences in the Grammar box at the top of page 8 to help you.*
- Give students about five minutes to write their sentences. Then have a member of each group read one of the group's sentences aloud. ✓ Ask students *What's one thing you have to do at home?* Have students answer in a complete sentence. If students have difficulty, provide the sentence frame *I have to _____.*
- 4** Say *Now we will read the sentences in the Activity 4 chart. Think about what each sentence says. Is it right or wrong?* Have a student read item 1 and the answer aloud. Discuss why the answer is correct. Then have students complete items 2–4. Review the answers as a class.

Apply 5

- Give students an example of one thing a teacher must do at school and one thing a teacher can't do. For example, say *At school, I must keep the classroom neat. I can't talk on the phone in class.* Say *Now say one thing you must do at home and one thing you can't do.* (I must set the table. I can't stay up past my bedtime.)
- 5** Draw students' attention to Activity 5 on p. 8. Read the directions aloud. Then point out the model dialogue. Have two students role-play it for the class. Put students into groups of three and have group members discuss home and school rules. Remind them to take turns and to use *have to*, *must*, *can't*, or *don't* in their rules.

Wrap Up

- Say *Before we end class today, let's play a game.* Write *have to*, *must*, *can't*, and *don't* on the board. Call on a student to say a rule using one of the words. For example, say *(Joya), say a rule with must.* The student says a rule such as *We must raise our hands in class.* That student then calls on a new student to say a rule using a different word. The game continues in this way.

Formative Assessment

- Can students
- talk about obligation with *must* and *have to*?
Ask students questions such as *What do you have to do in the morning? What must you do after school?*
 - talk about prohibition with *can't* and *don't*?
Write these sentences: *Put trash in trash cans. Keep off the grass. Wait your turn.* Have students rewrite each command using *can't* or *don't*.

Objective

- Students will
- identify and use words related to ocean pollution.

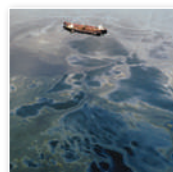
Vocabulary *oil spill, garbage, pollution, plastic, biodegradable*

Content Vocabulary *tankers, transport*

Resources Workbook p. 7; Audio CD TR: A5–A6; Video: Vocabulary 2; Classroom Presentation Tool: Vocabulary 2; Teacher’s Resource CD-ROM: Activity Worksheet I.2

Materials empty plastic bottle; paper grocery bag

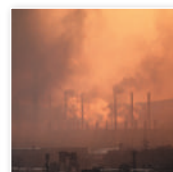
6 Listen and repeat. Then read and write. TR: A5



oil spill



garbage



pollution



a paper bag

- Oil spills, garbage, and dirty air are examples of pollution.
- Banana peels, plastic bottles, soda cans, old newspapers, boxes, and broken toys are examples of _____.
- Big ships called tankers transport oil across the ocean. When they have an accident and oil escapes, the result is an _____.
- Paper is _____. With time, it disappears.
- _____ bottles and bags are not biodegradable.

7 Work with a partner. Listen, talk, and stick. TR: A6

Oil spills happen when tankers have accidents on the ocean.

You're right!

1

2

3

4

5

9

Warm Up

- Write *pollution* on the board. Have students say it aloud. Tell students that *pollution* means harmful or poisonous things that get into the air, land, and water.
- On one sheet of paper, draw a simple picture of blue water to represent a clean ocean. On another sheet of paper, draw a picture of blue water with trash to represent a polluted ocean. Hold up both pictures and ask *Which ocean has pollution?*
- Say *Other things besides trash can cause pollution.* Ask *What other things can harm or poison the world around us?* (garbage, dirt, smoke from factories, cars) *Is pollution good or bad for people and animals?*

Present

- Say *Now we're going to learn some words about pollution.* Have students open their books to p. 9. Point to the photo of the oil spill and have students say the term aloud. Say *The black in the water is oil. Oil helps cars and other things work. But when it spills into the ocean, it hurts the ocean and everything in it.*
- Point to the photo of garbage. Say *When people are done using things, they throw them away. Things people throw away are called garbage. Empty soda cans and old newspapers are garbage. What are some other kinds of garbage?*
- Point to the photo of pollution. Say *This shows pollution from factory smoke. When too much dirty smoke gets in the air, it makes it hard for people and animals to breathe.*

Teaching Tip

Vocabulary Strategy: Suffix -able A suffix is a word part added at the end of a word. A suffix can change a word's part of speech. For example, the suffix *-able* turns a word into an adjective. Adding *-able* to the verb *renew* forms the word *renewable*, which is an adjective.

Suffixes also give clues to a word's meaning. The suffix *-able* means "capable of." For example, students can use the suffix *-able* to determine that the word *renewable* means "capable of being renewed."

- Show students an empty plastic bottle. Say *This is a plastic bottle. Many plastic things take a long time to break down and disappear.* Then hold up a paper bag. Say *This is a paper bag. Paper is biodegradable. Biodegradable things break down and disappear over time.*

Practice 6

- 6 Say *Now we're going to hear words and sentences that include the words we learned. Repeat each word and sentence out loud after you hear it.* Play TR: A5.
- Have students study the photos and captions at the top of p. 9. Ask *Which photos show things that harm water?* (the photos of the oil spill and garbage) *The photo of dirty factory smoke shows an example of what?* (pollution) *Which is biodegradable: plastic bags or a paper bag?* (a paper bag)
- Write *biodegradable* and *not biodegradable* on the board. Remind students that *biodegradable* garbage is garbage that disappears over time. Ask *Is a plastic pen biodegradable?* (no) *Is a paper plate biodegradable?* (yes) Write each example next to the correct phrase on the board. Say *Look inside your desk or backpack. Show me an item that is biodegradable. Then show me one that is not.*
- Have students take turns reading each incomplete sentence on p. 9 aloud. Use item 1 as a model. Then have students complete items 2–5. ✓ Ask *What word describes the kind of garbage that breaks down over time?* (biodegradable) *Is a newspaper biodegradable?* (yes) If students have difficulty, replay TR: A5 as you point to each photo.

Apply 7

- 7 Say *Let's do a sticker activity.* Arrange students in pairs. Have students read the directions for Activity 7. Say *Listen to each clue. Talk with your partner. Pick the sticker that shows the right picture.* Play TR: A6. Model completing the first item. Then have pairs of students complete the activity.

Wrap Up

- Call on a student to define a vocabulary word. For example, ask (Lin), *what is garbage?* That student then asks another student about a different vocabulary word. The activity continues until all the target words have been covered.

Formative Assessment

Can students

- identify and use words related to pollution?

Ask students questions such as *What's the word to describe garbage that disappears over time? What's created when a ship carrying oil crashes and the oil ends up in the ocean?*

Review For additional practice, direct students to Activity Worksheet I.2.

Objective

- Students will
 - use *will* and *won't* to talk about the future.

Grammar make predictions with *will* and *won't*

Content Vocabulary *future*

Resources Workbook p. 8; Audio CD TR: A7; Video: Grammar 2; Classroom Presentation Tool: Grammar 2; Teacher's Resource CD-ROM: Activity Worksheet I.3

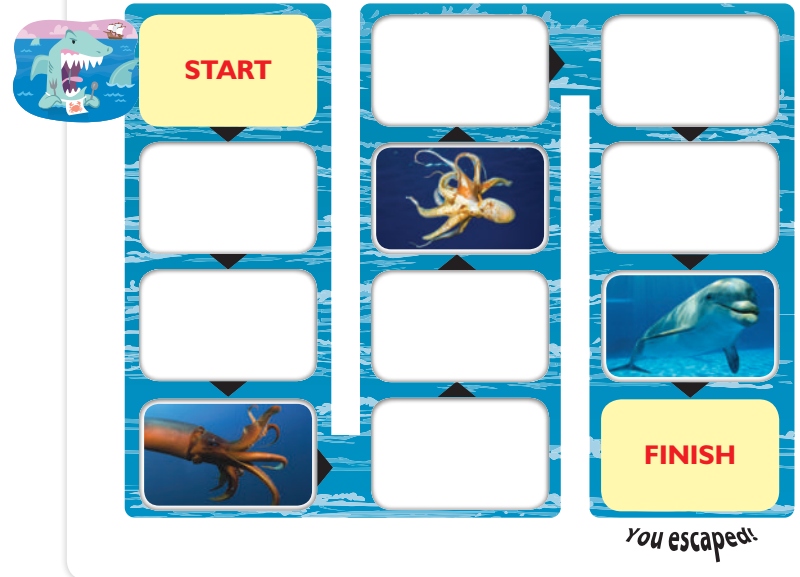
Materials scissors; coins

GRAMMAR TR: A7

What **will** happen in the future?

Sea animals and plants **will** disappear. We **won't** have clean air to breathe.

- 8 **Play a game with a partner.** Cut out the cards on page 97. Place them facedown in a pile. Ask and answer the questions, using *will* or *won't*.



10

Warm Up

- **Revisit** Say *We've learned how to talk about plans for the future.* On the board, write *I'm going to the park this weekend.* Read the sentence aloud and then ask *What are you doing this weekend?*
- Say *Today we're going to learn another way to talk about the future. This way doesn't talk about plans. It talks about things that are going to happen.*

Present

- **Explain** Say *When you talk about what is going to happen in the future, you use the word will.* Write the following on the board:

What will you do after school today?
I will _____.

- Read aloud the question and then model an answer, such as *I will go to the library.* Call on students and ask *What will you do after school today?* Have students begin their answer with *I will.*
- Draw students' attention to the Grammar box at the top of p. 10. Play **TR: A7**. Point out that *won't* is the contraction of *will not*. Write *will not = won't* on the board. Say *You use won't or will not to talk about something that isn't going to happen. For example: It won't (rain) this afternoon.* Tell students that they can use the contraction or the two separate words when talking about the future.

Grammar in Depth

A contraction is a single word formed by combining two or more words. It is formed by replacing certain letters with an apostrophe. Discuss with students contractions used in talking about the future with *will*, such as *I'll*, *you'll*, *he'll*, *she'll*, *it'll*, *we'll*, and *they'll*. Help students understand that these contractions are combinations of the words *I*, *you*, *he*, *she*, *it*, *we*, and *they* and the word *will*.

- Write *whale*, *dolphin*, and *sea turtle* on the board. Say *Imagine there is an oil spill. What will happen to a whale in the oil spill? Will it get sick? Will it be healthy?* Repeat with *dolphin* and *sea turtle*.

Practice 8

- 8 Have students read the directions to Activity 8. Assign partners and help them find and cut out the cards on p. 97. Say *Let's practice using sentences with will and won't.*
- Call on a student to help you model how to play the game. Your partner flips a coin and moves the indicated number of spaces. Have him pick a card from a pair's pile and read it aloud: *You throw food in the sea. Why will it disappear?* You answer *It will disappear because food is biodegradable! Now it's my turn.*
- Have partners play the game. Say *Take turns moving around the game board, asking and answering questions. Use the dialogue at the bottom of page 10 as a model.*

Apply

- Say *Pollution is bad for the oceans. It's also bad for the land and the air.* Then write the following sentences on the board:

Imagine that people throw garbage all over the park.
Imagine that smoke from factories gets into the air.

- Put students in small groups. Assign each group one of the items on the board. Say *Read your sentence. Think about it for a minute. Then talk about it. What do you think will happen? What do you think won't happen?*
- When groups are finished with their discussions, have group members work together to write two sentences about their topic. Tell them to use *will* and *won't* in their sentences. Then have them share their sentences with the class.

Wrap Up

- Say *Imagine that the problem of oil spills is not solved. Write one thing that you think will happen. Write one thing that you think won't happen. Remember to use will and won't in your answer.* Call on different students to read their sentences aloud.

Formative Assessment

Can students

- use *will* and *won't* to talk about the future?
- Ask students questions such as *Imagine that people throw garbage in the ocean. What will happen? What will you do to help protect the ocean?*

Review For additional practice, direct students to Activity Worksheet I.3.

Song - The Sounds of English

Song

Vocabulary

Vocabulary I an octopus, a shark, a layer

Grammar

Grammar I talk about obligation with *must* and prohibition with *can't*

Resources Workbook p. 9; Audio CD TR: A8; Video: Song; Classroom Presentation Tool: Song; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart), Activity Worksheet 1.4

Materials empty plastic water bottle; recycling bin

The Sounds of English

Resources Workbook p. 9; Audio CD: TR: A9; Classroom Presentation Tool: The Sounds of English; Picture Cards 49, 100, 113, 202, 315, 323, 325, 372, 487; The Sounds of English Card 54

9 Listen, read, and sing. TR: A8

Protect the Seas

Please, please protect the seas.
Put good deeds into motion.
Help save the oceans.

We must protect
the wonders of the seas,
to make a better world
for you and me.

We must stop polluting
the ocean blue.
An octopus would like that,
and so would you.



Humpback whale, Alaska, USA

THE SOUNDS OF ENGLISH TR: A9

shark

10 Listen and say.

Listen for the underlined sound. Then say the word.

- star
- shark
- large
- garbage
- movie star
- guitar

11

Use the Song 9

- **Set the stage** Say *We've talked about protecting the oceans. Protecting means keeping something safe. But how can we protect the ocean? Imagine we're at the beach. I have a bottle of water to drink. I drink my water. Now I have an empty bottle.* Show students an empty water bottle. Say *I don't want to keep it. Can it go in the ocean?* (no)
- Show students a recycling bin. Say *The bottle goes in here.* Put the empty bottle in the recycling bin. Say *Keeping the ocean clean is one way we protect it.*
- Say *Turn to pages 6 and 7 in your books. What animals do you see?* Have students point to each animal in the picture and say its name aloud. Ask *Where do these animals live?* (the sea, the ocean)

What can happen to animals if the ocean gets dirty? (The animals can get sick or die.)

- **9** Play the first three verses of **TR: A8** as students listen. Ask *What sea animal is named in the song?* Have students point to the photo of the animal named in the song. (octopus)

Extend

- Play or sing the following lines from the song: "We must stop polluting / the ocean blue. / An octopus would like that, / and so would you." Write the following words on the board: *a dolphin, a sea turtle, a squid, a whale.* Have students sing the lines four times, replacing *an octopus* with each animal listed on the board.

Be the Expert

About the Photo

This photo shows a humpback whale. Humpback whales are found in ocean waters throughout most of the world. The humpback is about the size of a bus, with a length of 14.6 to 19 meters (48 to 62.5 ft) and a weight of 36 metric tons (40 tons). These endangered animals are known for their beautiful songs, which travel long distances under water and often continue for up to half an hour.

Humpbacks eat mainly tiny, shrimp-like animals called krill, as well as small fish and tiny creatures floating in the water. Each year, humpbacks move from their summer feeding grounds near the North and South Poles to warmer waters closer to the equator.

Teaching Tip

Songs provide an engaging way to practice the pronunciation of the target words. Sing each line one at a time, modeling correct pronunciation. Have students repeat after you. As students become familiar with the pronunciation of the words, have small groups sing individual lines for other groups to repeat. Use the song to begin or end a class.

The Sounds of English Cards

You can use The Sounds of English Card 54 to teach the /a:r/ sound. The card and corresponding audio are available on the *Explore Our World* website.

- Draw a two-column chart on the board:

We must	We can't

- Play all of *Protect the Seas* on **TR: A8** as students follow along in their books. Complete song lyrics are on p. 93. Then say *Find the words we must. What must we do?* (protect the wonders of the seas, stop polluting the ocean blue) Have a student come to the board and write each phrase in the first column.
- Say *Now, find the words we can't. What can't we do?* (dump a mess in the sea) Have a student come to the board and write this phrase in the second column. Write the sentence frames *We must _____.* and *We can't _____.* on the board. Have students use information from the chart to complete the sentences.

The Sounds of English: /a:r/ as in shark 10

- **10** Hold up a photo of a shark. Ask *What is this?* When students answer, say *That's right. It's a shark.* Repeat the word *shark* and write it on the board. Say *shark* again and have students repeat. Then underline *ar* and make the /a:r/ sound.
- Say *Now let's listen to words that have the same /a:r/ sound you hear in shark.* Play **TR: A9** once while students listen. Then say *Let's listen and say.* Play **TR: A9** again and have students repeat the words.
- To check understanding, have students look at pictures, listen, and raise their hands when they hear /a:r/ as in *shark*. Display Picture Cards or other pictures that contain the target sound (star, car, arm, marker, farmer, artist, movie star, park, party), and some that don't. Hold up a card or picture, say the word, and have students raise their hands if they hear the target sound. Say *Look and listen. Raise your hand if you hear /a:r/ as in shark.* If students raise their hands in error, repeat the incorrect word and a word with the target sound to demonstrate the contrast.

Objectives

- Students will
- talk about corals.
 - name parts of a polyp.
 - compare and contrast two living things.

Reading Strategy Set a Purpose for Reading

Academic Language definition, diagram, label

Content Vocabulary polyps, tentacles, algae

Resources Workbook pp. 10–11; Audio CD TR: A10; Classroom Presentation Tool: Reading; Teacher’s Resource CD-ROM: Graphic Organizer (Venn diagram)

Materials photo of a coral reef, with fish and other sea animals visible

11 Listen and read. TR: A10

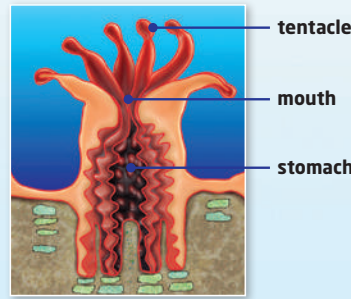
Colorful Corals

Corals look like a colorful garden under the water. But corals are not plants! They’re animals.

What’s for dinner? Each coral is made up of small animals called polyps. Polyps have a mouth, stomach, and tentacles to catch food. Many polyps live in the sunlit zone, where they eat small plants called algae.

What’s a coral reef? Most corals live together. As old corals die, new polyps grow on top. That’s how you get a coral reef. Some coral reefs are millions of years old, and they’re home to more than 4,000 kinds of fish!

Save the reefs! Coral reefs are amazing resources. They’re important for tourism and jobs. Scientists use reef animals to make new medicines and other products. Coral reefs are a source of food, too. But coral reefs are in danger. Because of pollution, many coral reefs are disappearing. Some people say that only 30 percent of the world’s corals will exist in the year 2050. We must protect our corals now.



The Great Barrier Reef is over 2,250 km (1,400 mi) long! You can see it from outer space!

12 Work with a partner. What did you learn? Ask and answer.



12

Warm Up

- **Recycle** Ask *What sea animals did we learn about?* (dolphins, squid, and so on) *What other kinds of sea animals do you know about?*
- Show students a photo of a coral reef. Say *This is called a coral reef.* There are coral reefs in some areas of the ocean. Point to a coral in the photo. Ask *Does coral look like a plant or an animal?* Say *Corals look like plants, but they’re animals.*

Present 11

- **Explain** Say *Before you read, set a purpose, or reason, for reading. Ask yourself, Why am I reading this? What do I want to learn? Your answer is your reading purpose.* Provide some examples of reading purposes, such as *I want to learn what*

corals are. Explain that a reading purpose can be a question, such as *What is hurting corals?*

- **11** Help students set a purpose for reading. Then play **TR: A10** and have students read along. Remind students to read with their purpose in mind. Play **TR: A10** a second time. Pause at the end of each paragraph to ask these questions:

Paragraph 1: *Are corals animals or plants?*

Paragraph 2: *What are corals made of? What body parts do polyps have? What do many polyps eat?*

Paragraph 3: *How do you get a coral reef? How old are some coral reefs?*

Paragraph 4: *How do people use coral reefs? Why are coral reefs in danger?*

Practice

- Reread paragraph 2, “What’s for dinner?” with students. Then ask *Do polyps eat plants or other animals?* (plants called algae) *How do polyps get food?* (They catch it with their tentacles.)
- **Graphic literacy** Draw students’ attention to the diagram on p. 12. Ask *What does this picture show?* (a coral polyp) Then say *The labels and lines point out different parts of the polyp.* Say *Let’s play a matching game. We’ll match the parts of a polyp with their definitions.* Write the following on the board:

stomach	where food enters a polyp
mouth	how a polyp catches food
tentacles	where a polyp’s food goes

- Point to *stomach* on the board and say the word aloud. Read the definitions in the second column. Then point to the diagram on p. 12. Say *A polyp has a stomach.* Put your hand on your stomach and say *People have a stomach, too.* Draw a line connecting *stomach* with *where a polyp’s food goes.* Say *Look at the diagram. Find the mouth. Look at the tentacles.* Then call on two students to come up and connect each remaining part to its definition.
- Give students time to copy each word and its matching definition. Say *Polyps and people both have mouths and stomachs. What part of our bodies do you think tentacles are like?* (hands, arms)

Apply 12

- **12** Draw students’ attention to Activity 12 and read the directions aloud. Pair students and tell them to take turns asking and answering questions about coral reefs and polyps. Tell them they can use all the information on p. 12 and their notes about the parts of a polyp to help them. When pairs have finished their discussions, have them read one of their questions to the class.

Wrap Up

- Draw a Venn diagram on the board. Say *Let’s think of two sea animals and tell how they’re alike and different.* Have students choose two sea animals, for example, whales and dolphins. Label the circles with the animal names. Ask *How are these two animals alike?* Write students’ responses in the space where the circles overlap. Then ask *How are these two animals different?* Write students’ responses in the appropriate circles.

About the Photo

The photo on this page shows corals from the Great Barrier Reef, a coral reef located off the coast of Queensland, Australia. It is not a single coral reef but a group of more than 2,800 different ones. The Great Barrier Reef is the largest structure on Earth built by living organisms. It is home to more than 1,500 species of fish and 400 species of corals.

Reading Strategy

Set a Purpose for Reading Setting a purpose helps guide students’ reading. Having a reading purpose helps students know what information to focus on as they read. For example, nonfiction passages contain many facts and visuals; looking for either feature separately will help students better comprehend the passage.

Formative Assessment

- Can students
- talk about corals?
Ask students questions such as *Where do corals live? What are some parts of a coral polyp? Why are corals in danger?*
 - identify parts of a polyp?
Show students a drawing of a polyp and have them name the three main parts. Have them use the picture on p. 12 as a guide.
 - compare and contrast two living things?
Ask students question such as *How are dogs and cats alike and different?*

Mission

Mission Protect the oceans.

Objectives

- Students will
- share ideas.

Resources Video: Meet the Explorer;
Classroom Presentation Tool:
Mission; Mission Poster

Be the Expert

Meet the Explorer

Sylvia Earle is an oceanographer and a National Geographic Explorer-in-Residence. She has led more than 100 underwater expeditions and has spent more than 7,000 total hours under water. Her research involves the exploration of ocean ecosystems and the use of new technologies to reach and work effectively in deep-sea environments.

Earle has written more than 190 scientific, technical, and popular publications about the ocean. She is the author of *Sea Change: A Message of the Oceans*. She has been called a “Living Legend” by the Library of Congress and was named the first “Hero of the Planet.” Earle is also the former chief scientist of the National Oceanic and Atmospheric Administration.

Protect the oceans.

Why must we protect the oceans?

Sylvia Earle diving,
Honduras



Sylvia Earle
Oceanographer
Explorer-in-Residence

“With every drop of water you drink, every breath you take, you’re connected to the ocean. No matter where on Earth you live. Taking care of the ocean means taking care of us.”



13

Mission

- Remind students that pollution is dangerous for the oceans and for sea animals. Help students discuss this idea with questions such as:
 - How can oil spills and garbage hurt sea animals?*
 - What are some ways to stop ocean pollution?*
 - Do you try to use things that are biodegradable?*
 - Why? Like what?*
- Draw students’ attention to the word *protect* on p. 13. Say *To protect means to keep safe from harm. Protecting the oceans means keeping the oceans safe from harm.*
- Have students read the question below the photo title. Then call on a student to read Sylvia Earle’s words at the bottom of the page. Ask *Why does Sylvia Earle think it’s important to protect the oceans?* (When we protect the oceans we protect ourselves.) Ask *Do you agree? Why do you think we must protect the oceans?*
- Put students in groups and have them discuss why we must protect the oceans.

Give the Unit Quiz

- Hand out the Unit I Quiz. Have students scan the pages. Say *Look at the directions, examples, questions, and pictures. Think about what you know and what you’ve learned.*
- Give students two or three minutes to preview the test.
- **Listening instructions, Section I** Point to the pictures on page 61. Say *Look at the pictures.* Point to the letters. *There is a letter on each picture. Write the letter that matches the sentence you hear.*
- Say *Now listen to an example.* Play **TR: AB28.** (Look at the garbage!) When students have written a letter, ask *What letter did you write?* When students respond with the letter G, begin the quiz. Say *Let’s begin.* Play the rest of **TR: AB28.**
- When students have completed Section I, have them put down their pencils. Say *Now you’re going to read and write.* Read the directions for Section 2 aloud. Ask *What do you have to do?* (Complete the sentences. Use words from the box.) Repeat the process for Sections 3 and 4. (3: Complete the sentences. Use *will* or *won’t*. 4: Read. Circle *True* or *False*.)
- Have students complete Sections 2–4 independently.
- **Listening instructions, Section 5** Read the directions aloud. Ask *What do you have to do?* (Listen. Read. Complete the sentences.)
- Say *Now listen to an example. Write the missing words to complete the sentence you hear.* Play **TR: AB29.** (Pollution harms whales, squid, and other animals.) When students have completed the sentence, say *What sentence did you write?* Begin the quiz when students respond with *Pollution harms whales, squid, and other animals.* Say *Let’s begin.* Play the rest of **TR: AB29.**
- **Speaking instructions** Point to the images at the top of p. 84. Say *Look at the pictures. Answer my questions. Use complete sentences. Now listen to an example.* Point to the oil spill in the photo on the left. Ask *What is this?* Say *It’s an oil spill.*
- See page 90 of the Assessment Book for questions and expected student responses.

Assessment

Resources Assessment Book
pp. 61–62, 84, 90, 93, 97;
Assessment Audio CD TR:
AB28, AB29

Be the Expert

Testing Tip

Make testing a part of learning. Make testing part of the overall instructional program. For example, create review sheets and study guides that students can use to prepare for tests. Have a positive attitude toward testing and test scores to help students approach testing situations with constructive feelings.

Assess Unit Objectives

Ask questions such as the following:

- *What animals live in each layer of the ocean?*
- *Why shouldn’t we throw plastic and garbage into the water?*
- *Why must we protect the oceans?*

Project For a theme-related closing activity, direct students to the Unit I Project Worksheet.

Vocabulary 1 a whale, an octopus, a squid, a shark, a dolphin, a sea turtle, resources, a layer, disappear

Vocabulary 2 garbage, plastic, biodegradable, oil spill, pollution

Grammar 1 talk about obligation with *must* and *have to* and prohibition with *can't* and *don't*

Grammar 2 make predictions with *will* and *won't*

Song *Protect the Seas*

Viewing sea animals and protecting the oceans

Meet the Explorer Sylvia Earle

Story Time *Stormalong and the Giant Octopus*

Resources Student Book pp. 4–10, 13; Teacher's Resource CD-ROM: Graphic Organizers (Word web)



Zoom In

Vocabulary

- Replay the vocabulary segments for students. Pause the video at each image and caption.

- Have students read each caption aloud. Then have them describe what is happening in the image.

Grammar

- Replay Grammar 1 or Grammar 2. Have students summarize the segment.

Song

- Play the song. Have students read the lyrics in the student book as they listen. Then have students close their books. Replay the song and have students sing along.

Viewing

- Play the viewing segment without audio. Ask *What things do you see in the video? List them on paper. Use your list to predict what this part of the video is about.*
- Replay the viewing segment with audio. Then ask *Was your prediction right? What did you learn after watching the video with sound?*

Meet the Explorer

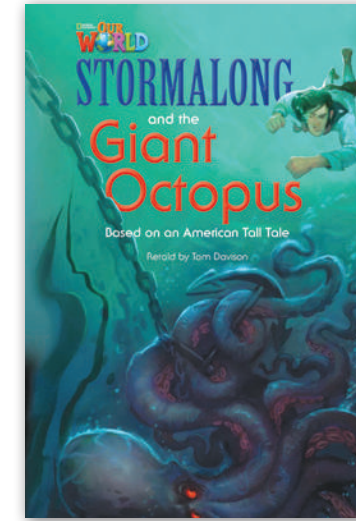
- Say *Sylvia Earle explores the ocean. She believes every young person can be an explorer. Ask What things in the world do you want to explore?*

Story Time

- View *Stormalong and the Giant Octopus* once with students.
- View it again. Pause the video and ask questions such as *What creature was pulling on the anchor chain?* (a giant octopus) *Why do you think Stormy wasn't scared?* (He's strong. He knew he could win the fight with the octopus.)

Stormalong and the Giant Octopus

Alfred B. Stormalong is a giant man who is the captain of a giant sailing ship. One day while Stormy and his crew are catching fish in the Atlantic, something in the ocean pulls on the ship's anchor and won't let go. What will Stormy do?



Before You Read

- **Activate prior knowledge** Ask students questions to help them start thinking about the story. Say *Were you ever on a boat? Did you see any animals in the water?*
- **Introduce the strategy** *To predict means to guess about something that will happen in the future.* Give students an example such as *I see dark clouds in the sky. I see lightning. I hear thunder. I predict it's going to rain. Say When you make predictions while reading a story, you use clues to guess what's going to happen in the story.*
- Say *As we read the story, let's write predictions in a chart.* Draw a three-column chart on the board. Label the columns **My prediction**, **Clues**, and **What happened**. Have students copy the chart. Say *Look at the picture on the cover. Read the title. Use the picture and title to make a prediction. What do you think this story will be about?*

While You Read

- Stop after every few pages to make predictions together about what will happen next.
 - pp. 4–5: *What kind of adventure do you think Stormy and his crew will have?*
 - p. 8: *What do you think is pulling on the chain of the ship's anchor?*
 - p. 9: *Do you think Stormy will get the anchor free? What clues make you think so?*

After You Read

- After finishing the story, have students review their predictions and clues in the first and second columns of the chart. For each prediction, ask *Was your prediction right? If so, write yes. If not, write what actually happened.* Have students write their responses in the third column of the chart.

Text Type tall tale

Reading Strategy Making Predictions

Vocabulary a sea turtle, a whale, a shark, an octopus

Grammar make predictions with *will* and *won't*

Resources Video: Story Time; Classroom Presentation Tool: Story Time; Teacher's Resource CD-ROM (Three-column chart), World Map Poster

Be the Expert

Our World in Context

The tall tale *Stormalong and the Giant Octopus* originally comes from New England. The New England region is located in the northeastern United States and includes the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. If possible, show students New England on a world map.

Reading Strategy

Making Predictions Making predictions involves using story clues and personal experience to figure out what will happen next. This helps students become active readers. Help students make predictions while reading. Stop after every few pages and have students write statements about what might happen next.

Text Background

Stormalong and the Giant Octopus is an American tall tale. Tall tales are stories about the amazing adventures of famous heroes who are usually not real. These heroes usually have larger-than-life characteristics and perform amazing and often impossible acts.

Student Book

TR: A2 Unit I. 1 Listen and read.

We must protect the oceans and the seas because they are full of life. If we don't, these important resources will disappear.

Many animals live near the top of the ocean because they like the light. There is lots of food there, too. This part of the ocean is called the "sunlit zone." It goes down to about 137 meters (450 feet). Dolphins live here.

The middle layer of the ocean is called the "twilight zone." This is because there isn't much light. It goes down to about 1,000 meters (3,300 feet). Few animals live in this layer, but one that does live here is the octopus.

The bottom layer of the ocean is cold and black. It is called the "midnight zone" because the sun doesn't reach below 1,000 meters (3,300 feet). Some amazing animals live in this dark part of the ocean! a whale; a squid; a dolphin; a sea turtle; a shark; an octopus

TR: A3 2 Listen and repeat.

- a resource We need to protect our resources.
- disappear Animals and plants can disappear.
- a dolphin Dolphins are very friendly.
- a whale The whale is the biggest sea animal.
- a layer Most fish live in the top layer of the water.
- an octopus An octopus has eight arms.
- a squid Are all squid red?
- a shark I saw a shark at the aquarium.
- a sea turtle A sea turtle can swim fast.

TR: A4 Grammar

We **have** to keep the oceans clean.
You **can't** throw trash into the ocean.
We **must** protect the oceans.
Don't leave food on the beach.

TR: A5 6 Listen and repeat. Then read and write.

- oil spill There was a bad oil spill near the beach, so we can't swim there.
- garbage Don't throw garbage on the beach!

- pollution Pollution makes things dirty and unsafe. It is in the air, in the oceans, and on the land.
- plastic Don't throw plastic bags in the water. Fish and birds can get hurt.
- biodegradable Food is biodegradable.

TR: A6 7 Work with a partner. Listen, talk, and stick.

1. This happens when tankers have accidents in the ocean. 2. We have this problem when the air, the sea, or the land becomes dirty. 3. To keep the ocean clean, if you see piles of this on the beach, clean it up! 4. You can make bottles with this material. It's not biodegradable. 5. Cardboard is not really garbage. It disappears with time.

TR: A7 Grammar

What **will** happen in the future?
Sea animals and plants **will** disappear.
We **won't** have clean air to breathe.

TR: A8 9 Listen, read, and sing.

Note: Lyrics for the song *Protect the Seas* are on Student Book p. 93.

TR: A9 10 The Sounds of English /är/ *shark*
Listen and say. Listen for the underlined sound. Then say the word.

- 1. star 4. garbage
- 2. shark 5. movie star
- 3. large 6. guitar

TR: A10 11 Listen and read.

Note: Text for the Reading *Colorful Corals* is on Student Book p. 12.

Workbook

TR: 1 Our World Workbook 5. Audio. Copyright 2015. National Geographic Learning, a part of Cengage Learning.

TR: 2 Unit I. 2 Listen. Check the sea animals that the girl saw at the aquarium.

Boy: Hi, Mika. How was your trip to the aquarium?
Girl: It was awesome! I saw lots of sea creatures.
B: Really? What did you see?

G: Well, there was a really big squid—and an octopus! They were cool.
B: What about a whale or a shark? Did you see them?
G: No, I didn't. But I saw some dolphins. They jumped really high!
B: Wow! What else did you see?
G: There was a beautiful green sea turtle. He was my favorite!
B: Cool. I want to go to an aquarium.

TR: 3 12 Listen. What do Ken and Misao think? Check how our lives will be different in 20 years.

Boy: How do you think our lives will be in 20 years? I think that people will have computers in their bodies!
Girl: Really? I don't think so... That won't be possible. But there will be many people in the world. So, families will live in one house. Grandparents, cousins, kids... everyone in the same house!
B: I agree. And there won't be enough resources. So people won't have much food.
G: Hmm, I don't agree with that. I think we'll have enough food, but we won't have enough water because the oceans will be full of oil spills and garbage.
B: No way! Of course we'll have water! And another thing... People won't have colds or feel sick anymore because we'll have better medicines.
G: Wow! Just imagine... We'll never be sick again!

TR: 4 13 Listen to the song. Check T for True and F for False.

Note: Lyrics for the song *Protect the Seas* are on Student Book p. 93.

TR: 5 14 Listen. Write the missing letters.

sharks; cars; smarter; party; garbage; hardest

TR: 6 16 Listen and read.

Looking for Lunch

It's another busy day in the ocean. All the sea creatures are hungry. A parrotfish eats the soft part of a coral as it swims around. The energy from the food passes from the coral to the fish. It keeps the parrotfish alive, but not for long! A much larger blacktip reef shark swims by and sees the parrotfish. It moves closer. Its sharp teeth cut the parrotfish. Gulp! Energy moves up another link in the food chain. The energy that was in the parrotfish is now in the shark. And that shark or some other fish may end up on your plate for lunch!

Sea creatures—like people—eat more than one thing. And many of these animals fight for the same food. All of the animals and the food they eat connect to form a "food web." In this web of life, energy moves from creature to creature. We are all connected to the ocean.

Answer Key

Student Book

Unit Opener SB p. 4

1. T 2. F 3. T

4 SB p. 8

1. Wrong 2. Right 3. Wrong 4. Right

6 SB p. 9

1. pollution 2. garbage 3. oil spill 4. biodegradable 5. plastic

7 SB p. 9

1. ship spilling oil 2. factory smoke 3. pile of garbage 4. plastic bottle 5. bin of paper and cardboard

Workbook

Go to pp. 205–206 for the Workbook Answer Key for this unit.

In This Unit

Theme This unit is about how inventions have changed the world.

Content Objective

- Students will
- identify how inventions solve problems.

Language Objectives

- Students will
- talk about inventions.
 - talk about habits in the past.
 - describe how to use an invention.

Vocabulary

Vocabulary 1 *an invention, a problem, a solution, a wheel, useful, imagination, an idea, invent, try, fail, succeed*

Vocabulary 2 *turn, lift, move, use, put*

Grammar

Grammar 1 describe habits in the past with *used to + verb*

Grammar 2 generalize using *you*

Pacing Guides

L5U2

Mission Use your imagination to solve problems.

Unit Opener

Objective

- Students will
- discuss a photo.

Resources Video: Introduction; Classroom Presentation Tool: Unit Opener; Teacher's Resource CD-ROM: Home-School Connection Letter; Unit Opener Poster; World Map Poster

Materials lightbulb

Unit 2

Good Idea!

Look and check. Then answer the questions.

1. This is
 a rocket.
 an airplane.
 a train.
2. What kind of transportation do you use?
3. What kind of transportation would you like to try?

Shinkansen bullet train, Shinjuku, Japan

14

Introduce

- **Build background** Say *The name of our next unit is "Good Idea!" An idea is something you think of.* Point to your head. Say *It's a thought or a plan that you make up. You can have ideas to solve problems. For example, imagine it's raining.* Ask a student *What should I do?* (Get your umbrella. Go inside.) Say (*Nasir* said, "Get your umbrella.") *That's a good idea!*
- Say *Some people think of new ideas to make our lives better.* Show students a lightbulb. Say *A long time ago, there were no electric lights. It was difficult to see at night. Then a man had an idea. He worked to make his idea real. He made a lightbulb.*
- Point out that almost everything in the classroom started out as someone's idea. Have students look around the room. Say *At one time, there were no pencils, chalkboards, or books. We have these things today because people had ideas to make them.*

Be the Expert

About the Photo

This photo shows a bullet train leaving Shinjuku Railway Station in Tokyo, Japan.

Shinjuku Railway Station is Japan's largest train station. An average of 3.5 million people pass through Shinjuku each day, making it the world's busiest train station.

The train is a Shinkansen train, which is part of a high-speed railway system in Japan. Shinkansen trains are electric. These trains can reach top speeds of 240 to 300 km (150 to 185 mi) per hour, and can seat 1,000 or more passengers. Several hundred trains run each day on the Shinkansen system.

Teaching Tip

Many vocabulary terms can be identified with a picture or an object. Words that cannot be identified with a picture or an object might be challenging to students. Help students learn these words by presenting them within a context.

For example, to teach the word *solution*, put it in the context of a problem. Give an example: *If the problem is rain, the solution is an umbrella.* If students still can't understand the meaning of a word, allow them to look it up in a bilingual dictionary.



15

- Put students into groups of three or four. Have students look at the photo on pp. 14–15. Ask questions to encourage discussion of the photo:
 - Is the object in the photo long or short?* (long)
 - Is it fast or slow?* (fast)
 - What do you think the photo shows?* (a train)
 - Is it modern or old-fashioned?* (modern)
 - What does the object in the photo do?* (helps people get from place to place)
- Guide students through the activity on p. 14. After students respond to item 1, confirm the answer. Say *This is a modern train that goes very fast. It's an invention that helps people go from place to place.* Then do items 2 and 3 with students. Have students share the different types of transportation they use. Write them on the board and talk about each one. Then say *I'd like to take a ride on (a bullet train).* Read item 3 aloud. Write students' responses on the board.

Vocabulary 1

Objectives

- Students will
- identify and use words related to inventions.
 - tell how inventions are useful.

Vocabulary *an invention, a problem, a solution, a wheel, useful, imagination, an idea, invent, try, fail, succeed*

Content Vocabulary *imagine, electricity, battery*

Resources Workbook pp. 12–13; Audio CD TR: A11–A12; Video: Vocabulary 1; Classroom Presentation Tool: Vocabulary 1; Teacher’s Resource CD-ROM: Activity Worksheet 2.1

Materials cell phone; scissors

1 Listen and read. TR: A11

2 Listen and repeat. TR: A12

Inventions are everywhere. Look around you. What inventions can you see?

Five thousand years ago, people had a **problem**. They couldn’t move big or heavy things! Then someone found the **solution**—the **wheel**. It changed our lives.

Imagine your life without electric lights. Before electricity, we didn’t have **useful** things such as batteries, computers, and cell phones.

electricity



a battery



a wheel

Be the Expert

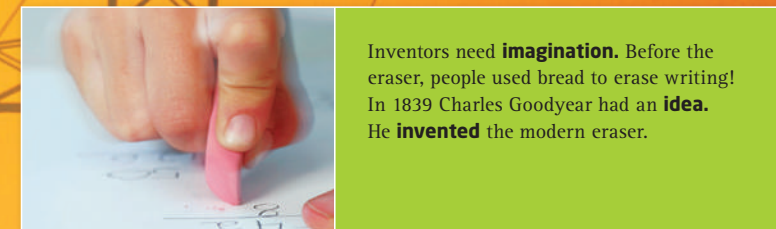
Vocabulary Strategy

Using the Suffix –ful A letter or letters added to the end of a word is called a *suffix*. When a suffix is added to a word, it forms a new word with a different meaning. A suffix may also change a word’s part of speech. The suffix *–ful* means “full of,” or “having the qualities of.” The vocabulary word *useful* is made up of *use* and the suffix *–ful* and means “capable of being put to use.” Other words that contain *–ful* include *beautiful* and *colorful*. Adding *–ful* to *beauty* and *color* changes them from nouns to adjectives.

Formative Assessment

- Can students
- identify and use words related to inventions?
Ask students questions such as *What do inventors need? What do inventors do if they fail the first time?*
 - tell how inventions are useful?
Ask students questions such as *What invention is a solution to the problem of not being able to move things?*

Review For additional practice, direct students to Activity Worksheet 2.1.



Inventors need **imagination**. Before the eraser, people used bread to erase writing! In 1839 Charles Goodyear had an **idea**. He **invented** the modern eraser.



The Wright brothers **tried** to fly many times, but they **failed**. Finally, in 1903, they **succeeded**. Now that we have planes, our world is very different.

3 Work with a partner. What did you learn? Ask and answer.

When did the Wright brothers fly a plane?



They flew a plane in 1903.

Warm Up

- **Recycle** Write the column headings and text below on the board:

Long Ago	Today
candles	
tell stories	

- Point to *candles*. Say *Long ago, people used candles. Today, what do people use to see at night?* (electric lights) Write *electric lights* under **Today**. Point to *tell stories*. Say *Long ago, people told stories at night. Today, how do people spend time at night?* (watch TV, play video games) Write responses under **Today** and say *Each of these things is an invention. Someone had an idea to make them.*

Present

- Have students turn to pp. 16–17. Say *Let’s learn some words about inventing things. Repeat each word after me.* Point to and say each word.
- **Explain** Say *First, a person has an idea.* Point to your head and say *An inventor uses her imagination to make her idea real. The item she makes is her invention. Inventions give solutions to problems. Inventions are useful.* Point to the photo of the wheel. Say *A wheel is an invention. It helps us to move things. Sometimes, inventors fail. Their inventions don’t work. Inventors must try and then try again before they succeed.*

Practice 1 2

- **1** Say *Let’s read and listen to the information on pages 16 and 17.* Play TR: A11.
- Discuss the information. Ask questions:
 - What problem did people have 5,000 years ago?* (They couldn’t move things.)
 - What was the solution to this problem?* (the wheel)
 - What did the Wright brothers do before they succeeded at flying?* (They failed many times.)
- **2** Say *Now we’re going to listen to words and sentences with those words.* Play TR: A12. Have students repeat each word and sentence.
- Write *An invention is a useful solution to a problem.* Underline *invention, useful, solution, and problem.* Use the inventions named on pp. 16–17 to help students understand that every invention is a solution to a problem.

Apply 3

- **3** Have two students model the dialogue on p. 17. Say *Think of questions to ask about what you learned. Use the new words to ask and answer questions.* Give students five minutes to think of some questions to ask. Then have them write their questions on a separate sheet of paper.
- Pair students. Say Ask your partner the questions you wrote. Write your partner’s answers. Gather all the questions. Choose several to ask the class.

Wrap Up

- Have a student to act out a vocabulary word for the class to guess. The student who guesses correctly takes the next turn. Model with a difficult word, such as *invention*, by pointing to inventions in the room such as a cell phone and a computer.

Objective

- Students will
- describe habits in the past with *used to + verb*.

Grammar describe habits in the past with *used to + verb*

Resources Workbook p. 14;
Audio CD TR: A13; Video: Grammar 1;
Classroom Presentation Tool:
Grammar 1

Materials scissors

Related Vocabulary
habit

GRAMMAR TR: A13

People **used to** erase writing with bread.
Why **did** people **use to** read by
candlelight?

We **didn't use to** have erasers.
They **didn't use to** have electric
lights.

did didn't used to use to

4 Complete the sentences. Use words from the box. Then role play the conversation with a partner.

A: "_____ you _____ (make) phone calls when you were a kid, Dad?"
B: "Yes, I did. But I _____ (not / have) a cell phone."
A: "Really? So how _____ you _____ (text) your friends?"
B: "When I was young, we _____ (not / text) our friends.
We _____ (write) letters."

5 Play tic tac toe. Cut out the game board and cards on page 99. Talk about inventions.



18

Warm Up

- Set the stage** Describe some of your past habits to students. For example, say *When I was younger, I used to call my friends on the telephone. I used to wash the dishes. I used to play records on a record player.* Then write the sentences on the board.
- Act it out** Act out making a telephone call by using your finger to show turning a rotary dial or pressing a series of buttons on a phone.
- Read each sentence aloud, and then say a sentence using the phrase *didn't use to*. For example, after the first sentence, say *I didn't use to have a cell phone.* Continue with the other sentences and have students repeat what you say.

Present

- Draw students' attention to the Grammar box on p. 18. Say *Let's listen to what people used to do and didn't use to do in the past.* Play **TR: A13**. Have students repeat each sentence aloud. Write the following on the board:

People used to _____.	People didn't use to _____.
tell stories	have TV

- Point out that the verb *used to* loses the *-d* when it's used with *didn't*.
- Have students think of things people used to do in the past. Write their ideas below *People used to _____*.

Grammar in Depth

The phrase *used to + verb* is used to talk about actions that were performed repeatedly in the past or to describe how things were in the past. For example: *People used to read by candlelight. Travel used to be difficult.*

This is different from the phrase *be used to* which means "be familiar with." For example: *I'm not used to dialing my new cell phone.*

Teaching Tip

Students may not tell you when they don't understand the instructions for an activity. This may happen more often when students are working in pairs or groups. Before beginning an activity, take a moment to review the instructions with the class. Then walk around the room to check that students understand by asking individuals to repeat the instructions back to you.

- Have students brainstorm things people didn't use to have. Write those things below *People didn't use to _____*. Call on students to read each sentence frame aloud, filling in the blank with a different item from the list.

Practice 4

- 4** Explain to students that this activity is a conversation between a child and the child's father. They are talking about how things were in the past. Then read the directions out loud. Complete the first sentence together. Point out the word *make* in parentheses.
- Say *I have to use make and words from the box to fill in the blanks.* Then read *"make phone calls when you were a kid, Dad?" The child is asking the father if he used to make phone calls when he was a child. I'll add Did to the first blank and use to to the second blank.* Tell students to do the same.
- Call on a student to read the completed question aloud. *"Did you use to make phone calls when you were a kid, Dad?"* Say *That sounds right!*
- Have students complete the activity. Walk around the room to check students' work. If students have difficulty with the word *not* in parentheses, remind them that the word *didn't* is a contraction of the words *did not*.

Apply 5

- Introduce the activity by reminding students of inventions that have made life easier or more enjoyable—for example, electric lights, cars, airplanes, video games. Write them on the board and call on students to add other inventions to the list.
- 5** Read the directions for Activity 5 aloud. Help students find and cut out the game materials and review with them how to play tic tac toe. Then, using the appropriate game card, model the dialogue on p. 18 with a student. Put students in pairs, and have pairs take turns talking about inventions and marking *X* and *O* on the game board.

Wrap Up

- Ask students questions such as *What songs did you use to sing when you were younger? What books did you use to read?* Listen to several responses to each question before moving on to the next one.

Formative Assessment

Can students

- describe things they did in the past with *used to + verb*?

Ask students questions about when they were young children, for example, *When did you use to go to bed? What TV shows did you use to watch?*

Objective

- Students will
- identify and use action words to give instructions.

Vocabulary

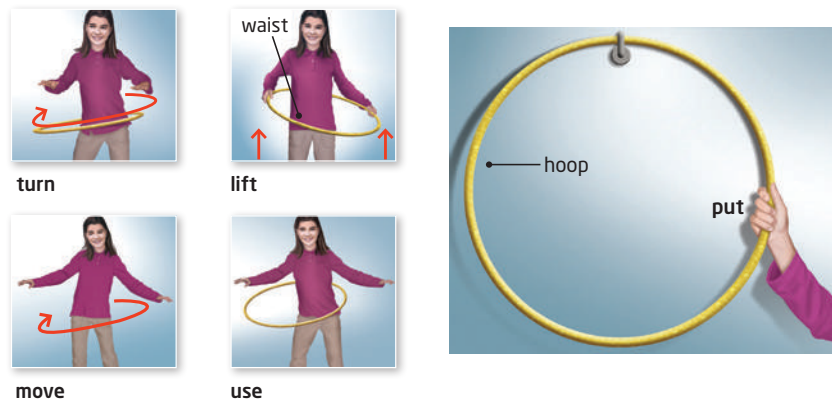
turn, lift, move, use, put

Content Vocabulary *ground, hula hoop, waist*

Resources Workbook p. 15; Audio CD TR: A14–A16; Video: Vocabulary 2; Classroom Presentation Tool: Vocabulary 2; Teacher’s Resource CD-ROM: Activity Worksheet 2.2

Materials hula hoop (optional)

6 Listen and repeat. TR: A14
Complete. Then listen and check your answers. TR: A15



The “hula hoop” is an old invention, but it’s very popular today. It’s fun and it’s good exercise!

1. How do you _____ a hula hoop? It’s easy. Follow these instructions.
2. _____ the hula hoop on the ground. Stand in the middle.
3. _____ the hoop to your waist.
4. _____ your waist in a circle. Don’t hold the hoop!
5. The hoop _____ round and round. Can you feel it?

7 Listen and stick. Put the stickers in order. Then tell your partner how to use this toy. Use the stickers to help you remember! TR: A16

1	2	3	4	5
				19

Warm Up

- **Recycle** Have students turn to pp. 16–17. Point to the photos of the wheel and the eraser. Have students say the names of each one aloud. Ask *What are these two things examples of?* (inventions) Ask *What are some things wheels help us do?* (move a car or bike) *What does an eraser help us do?* (correct mistakes easily)

Present

- Show students the hula hoop on p. 19. Say *The hula hoop was invented a long time ago. It’s a toy people still use today.* Write the word *use* on the board. Say *When you use an item, you do something with it. People use hula hoops to play and exercise.*

- **Act it out** Say *Let’s imagine we have hula hoops.* Write the word *put*. Say *Let’s put our hoops down.* Pretend to put the hula hoop down on your desk and have students repeat the action.
- Model picking the hula hoop up. Say *Watch what I do. I pick up my hula hoop. I lift my hula hoop.* Write the word *lift*. Model turning the hula hoop in your hands. Say *I turn the hoop. It goes in a circle.* Write the word *turn*.
- Pretend to put the hula hoop around your waist. Say *A hula hoop goes around your waist. You must move your waist to use the hula hoop.* Write the word *move* on the board. Ask *Who can show me how you move to use a hula hoop?* Have students demonstrate. Finally, point to each word on the board and have students say it aloud.

Our World in Context

Since ancient times, hoops have been used as toys. The hula hoop is named after the Hawaiian dance *hula*, which is performed by moving the hips in a circular motion. A similar motion is used to keep the hula hoop turning around the user’s waist. The hula hoop was popular around the world in the 1950s, but is less popular today.

Teaching Tip

Activities involving physical activity are known as kinesthetic activities. Be sure that students have regular opportunities to participate in kinesthetic activities during class. These activities are especially helpful when students are learning action words. Being able to connect action words to specific movements will help students learn and remember these vocabulary words more easily.

Practice 6

- **6** Have students turn to p. 19. Say *Now you’re going to hear words and sentences with those words. Repeat each word and sentence after you hear it.* Play TR: A14.
- Complete item 1 with students. Then have students complete the activity on their own. ✓ Give a book to different students and say commands such as *Move the book. Lift the book.* If students have difficulty, act out vocabulary words with small groups.
- After students finish the activity, play TR: A15 and have them check their answers. Point out that from item 4 to item 5, the verb changes from *turn* to *turns* because the subject changes from *you* to *the hoop*.

Apply 7

- **7** Say *Let’s do a sticker activity.* Show students the stickers for this unit. Say *The stickers show you how to use the toy. But the stickers are not in order.*
- Put students in pairs. Say *First, listen to the instructions.* Play TR: A16 and pause after the instructions. Say *Put the stickers in the boxes when you hear the words.* Continue playing TR: A16, pausing after the first two lines of dialogue. Say *I hear her say “moves.” I find the sticker for move and put it in box 1 because that’s the first word I hear.*
- Continue playing the audio, pausing after each line for students to place their stickers. When students finish, say *Use the stickers to tell your partner how to use the toy.*

Wrap Up

- Say *Let’s show different ways we move.* Call on students. Say *(Paul), lift your book up. (Sara), move your leg. (Raina), use the pencil sharpener.* Repeat until you have used each word.

Formative Assessment

- Can students
- identify and use action words to give instructions?
- Ask students to summarize how to use a hula hoop or other toy.

Review For additional practice, direct students to Activity Worksheet 2.2.

Objectives

- Students will
- generalize using *you*.
 - ask and answer questions about how and why you use inventions.

Grammar generalize using *you*

Academic Language *generalize, specific*

Content Vocabulary *backpack, knife*

Resources Workbook p. 16; Audio CD TR: A17; Video: Grammar 2; Classroom Presentation Tool: Grammar 2; Teacher's Resource CD-ROM: Activity Worksheet 2.3

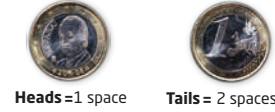
Materials coins and paper clips or other small objects

GRAMMAR TR: A17

You need to have imagination to invent things.
What do **you** do with this invention?

You should always try again if **you** fail.
Do **you** play with it?

- 8 Play a game.** Work with a partner. Ask questions about the inventions you see. Take turns.



20

Warm Up

- Say *We use the word you when we talk to one person or to more than one person.* Call on a student and say (*Naoko*), *you're wearing a (red) shirt. When I talk to (Naoko), I call her "you." I'm talking just to (Naoko).*
- Then say *This is the way we usually use you. But today we're going to learn a new way.*
- Have several students stand at their desks. Say *You're standing. You're at your desks. You're students. When I talk to all of you, I say you.*

Present

- Gesture toward the class. Say *We can use the word you to talk about people in general.* On the board write and say *You need to work hard in school.* Say *I'm not talking to one student. I'm talking to all of you. I'm talking about students in general.*
- Point out the Grammar box at the top of p. 20. Play **TR: A17.** Have students read each sentence aloud. Explain that in each sentence, *you* means people in general, not one particular person.
- Say *Let's use you to talk about inventions.* Ask *What do you do with a pencil?* (write) Say and write on the board *You write with a pencil.* Provide additional examples. Have students read the sentences aloud.

Grammar in Depth

The words *you* and *one* can both function as impersonal pronouns, or pronouns that do not refer to a specific person or thing.

However, *one* is generally considered more formal than *you*. *You* is often used in conversation and informal writing. *One* is more common in formal speech and writing. For example:

Not formal: *You look with your eyes and listen with your ears.*

More formal: *One looks with one's eyes and listens with one's ears.*

Practice

- Write *knife, eraser, backpack, and cell phone* on the board. Say *Write clues about each invention. Start your clues with the word you.* Point to *knife* and ask *What do you do with a knife?* (cut meat) Write *Clue: You cut meat with it.* on the board. Underline *You*. Then read the clue aloud and ask *What is it?* (a knife) *Now you do it!*
- Have pairs write clues for the rest of the words on the board. Ask *What do you do with a crayon?* If students have difficulty answering this question, read the Grammar box together.
- Call on students to read their completed clues aloud. Have the class use the clues to identify the invention.

Apply 8

- **8** Say *Look at the photos on page 20. Ask and answer questions about these inventions.* Model the dialogue with a student.
- Show students how to play the game. Flip a coin and move a small object on the game board, such as a paper clip. Model a sample question. Point to the cell phone and ask *What's this?* (It's a cell phone.) Ask *How do you use it?* (You use it to talk to someone in another place.)
- Assign partners and have students play the game. Remind them to use *you* in their questions and answers. Tell students to use complete sentences when they answer. Write the following prompts on the board:

What do you do with it? How do you use it? Why do you need it?

Wrap Up

- Write *TV, airplane, clock, and guitar* on the board. Say *Let's ask and answer questions about inventions.* Model asking a question such as (*Haruki*), *how do you use a bicycle?* The student might respond *You sit on the seat and move your feet on the pedals.* That student then asks another student a question about an invention. Continue until all students have a turn.

Formative Assessment

Can students

- generalize with *you*?
Ask students questions about how objects are used. For example, *What do you do with a kite? What do you do with scissors?*
- ask and answer questions about how and why you use inventions?
Have partners ask and answer questions about familiar inventions, such as a pencil sharpener, a stapler, and a cell phone.

Review For additional practice, direct students to Activity Worksheet 2.3.

Song - The Sounds of English

Song

Vocabulary

Vocabulary 1 an invention, a problem, a wheel, useful

Grammar

Grammar 1 describe habits in the past with *used to* + verb

Grammar 2 generalize using *you*

Resources Workbook p. 17; Audio CD TR: A18; Video: Song; Classroom Presentation Tool: Song; Teacher's Resource CD-ROM: Activity Worksheet 2.4

Related Vocabulary

creativity, electricity

The Sounds of English

Resources Workbook p. 17; Audio CD TR: A19; Classroom Presentation Tool: The Sounds of English; Picture Cards 3, 67, 183, 193, 290, 346; The Sounds of English Card 23

9 Listen, read, and sing. TR: A18

Inventions

Creativity!
Electricity!
Creativity changes the world!
Inventions solve problems.
Problems that we used to have are gone!
The wheel and the cell phone
help to make our world go around!



THE SOUNDS OF ENGLISH TR: A19

yes

10 Listen to the underlined sounds.

Say the words.

1. year you
2. yellow use
3. useful used to

21

Use the Song 9

- Say *Inventions help us do things*. On the board, write *People used to only _____, but now they _____*. Say *People used to only walk, but now they ride in cars*. Point to the sentence parts as you say the words that complete the sentence. Say *People used to only talk face to face, but now they use cell phones*. Have students help you finish a sentence. Say *People used to only travel long distances by boat, but now they ...* (travel by airplane.)
- 9 Say *We're going to hear a song about inventions. Listen for the names of inventions that solved problems*. Play the first two verses of the song (TR: A18). Stop the audio and ask *What inventions were named?* (the wheel, the cell phone)
- Tell students the rest of the song names other useful inventions and the problems they solved. Play TR: A18 all the way through as students read along. Complete song lyrics are on Student Book p. 93.
- Put students into pairs. Have partners identify each invention mentioned in the song. Then have them discuss which invention they think is the most important, and why. Say *I think computers are the most important invention because they make other things work, like the machines in offices and hospitals*. When pairs have finished their discussions, have them share their opinions with the class.
- Play TR: A18 again and have students sing along. Ask *What does the song say can change the world every day?* (imagination and ideas)

Extend

- Play the verse that begins "You used to have to walk..." Have students find the phrase *used to*. Then have them rephrase the other problems using *used to*. (*You could only talk* becomes *You used to only talk*; *You could take only boats* becomes *You used to take only boats*.)
- Remind students that *you* can mean people in general. And it can also mean one particular person. Say *As you listen to the song, raise your hand when the you refers to people in general. Raise both hands when the word you is used for you the listener*. Model by saying *You used to have to walk* and raising your hand. Then say *Can you change the world?* and raise both hands. Then play the song and pause for each use of the word *you* to check students' responses.

The Sounds of English: /j/ as in yes 10

- 10 Hold up a picture of a container of yogurt or Picture Card 346. Ask *What's this?* When students answer, say *Yes. It's yogurt*. Then write this sentence on the board: *Did you use to eat yogurt when you were young?* Read the question to the class and write the response (Yes, I did.) on the board. Have students read the question and answer as you underline the *y* in *you* (twice), *yogurt*, *young*, and *yes*.
- Call on two students to stand and take turns asking each other the question and answering it. Repeat with other pairs.
- Write *use*, *used to*, and *useful* on the board. Read each word or phrase and underline the first *u* in each one. Tell students that *u* sometimes makes the same /j/ sound you hear in *yes*. Then say each word again and have students repeat.
- Say *Now let's listen to other words you know that have the same /j/ sound you hear in yes*. Play TR: A19 once while students listen. Then say *Let's listen and say*. Play TR: A19 again and have students repeat the words.
- To check understanding, have students look at Picture Cards, listen, and raise their hands when they hear /j/ as in *yes*. Display Picture Cards or other pictures that contain the target sound (*yellow*, *young*, *you*, *your*, *yawn*, *yogurt*), and some that don't.
- Hold up a card or picture, say the word, and have students raise their hands if they hear the target sound. Say *Look and listen. Raise your hand if you hear /j/ as in yes*. If students raise their hands in error, repeat the incorrect word and a word with the target sound to demonstrate the contrast.

Be the Expert

About the Photo

In this photo, a tiger cub swats a remote-controlled camera in Bandhavgarh National Park, located in Madhya Pradesh, India. The park is home to nearly 60 tigers.

Wildlife photographer Steve Winter took this photo. It used to be hard to take photos of tigers in their natural environment. Now Winter is able to use special cameras to photograph tigers without disturbing them. The cameras use special equipment to take a photo whenever an animal walks by—even at night.

The Sounds of English Cards

You can use The Sounds of English Card 23 to teach the /j/ sound. The card and corresponding audio are available on the *Explore Our World* website.

Review For additional practice, direct students to Activity Worksheet 2.4.

Objectives

- Students will
 - identify and describe inventions.
 - ask questions about a text.
 - discuss their opinions about inventions.

Reading Strategy Ask Questions

Academic Language graph, opinion

Content Vocabulary design, patent

Resources Workbook pp. 18–19;
Audio CD TR: A20; Classroom
Presentation Tool: Reading;
Teacher’s Resource CD-ROM:
Graphic Organizers (Interview)

11 Listen and read. TR: A20

Creative Kids

Did you know that a teenager had the first idea for a television? And a six-year-old boy invented the toy truck? Kids are great inventors because they have a lot of imagination.

1994: Chris Haas was nine years old when he designed a “hands-on basketball.” His basketball has painted hands on it. The hands show you where to put your hands when you throw the ball. Today people all over the world use his invention.



1994: “Wristies” protect you from the cold. Kathryn Gregory was only ten when she had the idea. She was in the snow and her wrists hurt because they were cold and wet. So she invented Wristies.

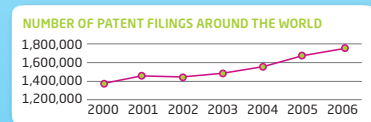


1905: When Frank Epperson was eleven, he left a cup with soda and a stick in his yard. That night he forgot about it. It was a very cold night. When he went outside the next morning he found something amazing: a “Popsicle”!



12 Work in groups of three. Discuss the questions.

- Do you have the same opinion?
- Which story was the most interesting? Why?
- Which invention was the most useful? Why?



Neiro true
Diane Bisson, a Canadian industrial designer, invented plates and bowls that you can eat!

Warm Up

- **Build background** Say *Today, we’re going to read about young people who invented things.* Ask *Do you have an idea for an invention? What is it?* Have students tell the class their ideas.
- Have students open their books to p. 22 and look at the pictures. Point to the ball and ask *What do you see on the ball?* (hands) Then point to the “Wristie” and ask *What do you think this is for?* Point to the “Popsicle” and ask *Do you like to eat these?* Explain that all three of the items pictured were invented by kids.

Present 11

- 11 Read the title of the Reading aloud. Say *We’re going to learn about kids with a lot of imagination.* Say *A good imagination makes you think about*

ordinary things in a different way. And that allows you to be creative. Tell students that another word for *creative* is *inventive*.

- Write *inventive* on the board. Then ask *What vocabulary words does inventive sound like?* (*invent, invention*) Add *invent* and *invention* to the board. Then say *A person who invents something is called an inventor.* Add that word to the board and then underline *invent* in *invention, inventive, and inventor*, and tell students that all four words are related, or connected in meaning.
- Play TR: A20 and have students read along. After students finish, have them name each invention discussed in the reading.

Practice

- Play TR: A20 a second time. Pause at the end of each paragraph to check comprehension:

Paragraph 1: *Why are kids great inventors?*

Paragraph 2: *Why is a “hands-on basketball” better than other basketballs?*

Paragraph 3: *What is a “Wristie”? What does a “Wristie” do?*

Paragraph 4: *How did Frank Epperson invent the “Popsicle”?*

- **Graphic literacy** Point out the line graph at the bottom of p. 22. Read the title aloud. Say *A patent is a paper that says that a certain inventor is responsible for an invention. When an inventor files a patent, he is trying to protect his idea. If he gets a patent, nobody else can take his idea.*
- Say *The numbers on the left and at the bottom of a graph give important information. In this graph, the numbers on the left show the number of patents. Ask What do the numbers at the bottom of the graph show?* (the years 2000–2006)
- Guide students to use the graph to find information. Say *Let’s find the year that had the most patents. Find the greatest number on the left.* (1,800,000) Tell students there’s one dot for each year. Then ask *What dot comes closest to the greatest number?* (2006) *So, 2006 is the year that had the most patents filed.* Continue asking questions about the graph. *How many patents were filed in 2001?* (a little more than 1,400,000)

Apply 12

- 12 Divide the class into groups of three. Point out the two questions in Activity 12 and read each one aloud. Say *Reread “Creative Kids.” Then talk about the questions with your group.* Allow time for groups to discuss the questions and share their opinions. Then select a student from each group to summarize the group’s discussion for the class.

Wrap Up

- Say *I’ll say why or how an invention was made. Think about the Reading and tell me the name of the invention.* For example say *A boy left soda and a stick in the cold overnight.* (Popsicle) Continue until students have identified each of the inventions in the reading.

Our World in Context

Philo T. Farnsworth was only a high-school student when he came up with the basic idea for television. By 1927, when he was just 21 years old, he was successful in producing the first television.

Television has changed greatly since its invention in the 1920s. Originally, televisions could show only black and white pictures. Color televisions became available in the 1950s. The television is a very popular invention. By the year 2000, there were enough televisions in use for one out of every four people in the world!

Reading Strategy

Ask Questions Explain to students that asking questions helps them understand and remember a text. Encourage students to ask questions before reading to set a purpose. For example, students can ask *Who is this reading about? Why is she important?* While they read, students should ask *who, what, where, when, why,* and *how* questions about what they are reading. Tell students to ask questions after they read to check their understanding. For example, students can ask *Which parts are unclear to me? What is the main idea?*

Formative Assessment

- Can students
- identify and describe inventions?
Ask students questions such as *How does a “hands-on basketball” work? How was the first “Popsicle” made?*
 - ask questions about a text?
Tell students to ask you questions about an invention from the reading that they want to learn more about.
 - discuss their opinions about inventions?
Ask students questions such as *What is your favorite invention from this unit, and why? What invention do you think is the most useful, and why?*

Mission

Mission Use your imagination to solve problems.

Objective

- Students will
- share ideas.

Content Vocabulary *curiosity, typical*

Resources Video: Meet the Explorer: Aydogan Ozcan; Classroom Presentation Tool: Mission; Mission Poster

Be the Expert

Meet the Explorer

Aydogan Ozcan is an electrical engineer and a National Geographic Emerging Explorer. His research team at the University of California, Los Angeles has invented a way to turn cell phones into microscopes. This new technology can be taken to the most remote areas of the world. It will allow doctors and other medical professionals to help diagnose malaria and other deadly diseases in these regions.

The invention uses a special light source and the phone's camera to take an image of a blood sample. "It's lightweight, instantly shows us huge numbers of cells, and fits into the palm of your hand," explains Ozcan. Ozcan believes that in the future, it will not only be important to develop new technologies, but it will be important to use the technology we have in new ways. He says, "That's what will transform global health care in powerful, practical ways we've never before imagined."

Use your imagination to solve problems.

What are some typical problems in your daily life? Can you solve any of them with an invention?

NATIONAL GEOGRAPHIC

Aydogan Ozcan
Electrical Engineer
Explorer

"In science it's always a long train of ideas. Many succeed, but in between you often fail . . . science is entirely based on curiosity."

23

Mission

- Discuss using imagination and the creativity it inspires to solve problems. Have students look at the photo on p. 23. Tell them the man in the photo has solar panels on his back. Ask questions such as:
 - What do you think he uses the solar panels for?* (to charge cell phones or computers)
 - What problem do you think the solar panels solve?* (providing power in a remote place)
 - What things cause problems in your day?*
 - What are solutions for those problems?*
- Read the quote at the bottom of the page. Ask *Why do you think scientists and other creative people often fail when they try to solve problems?* (Problems are hard to solve. They're trying things that have never been done before.)
- Form small groups and have students discuss the questions on p. 23.

Give the Unit Quiz

- Hand out the Unit 2 Quiz. Have students scan the pages. Say *Look at the directions, examples, questions, and pictures. Think about what you know and what you've learned.*
- Give students two or three minutes to preview the test.
- **Listening instructions, Section 1** Point to the pictures on p. 63. Say *Look at the pictures.* Point to the letters. *There is a letter next to each picture. Write the letter that matches the sentence you hear.*
- Say *Now listen to an example.* Play **TR: AB30.** (The cell phone is a popular invention.) When students have written a letter, ask *What letter did you write?* When students respond with the letter F, begin the quiz. Say *Let's begin.* Play the rest of **TR: AB30.**
- When students have completed Section 1, have them put down their pencils. Say *Now you're going to read and write.* Read the directions for Section 2 aloud. Ask *What do you have to do?* (Complete the sentences. Use *you* and words from the box.) Repeat the process for Sections 3 and 4. (3: Complete the sentences. Use *use to* or *used to* and the words in parentheses. 4: Read. Circle *True* or *False*.)
- Have students complete Sections 2–4 independently.
- **Listening instructions, Section 5** Read the directions aloud. Ask *What do you have to do?* (Listen. Read. Complete the sentences.)
- Say *Now listen to an example. Write the missing words to complete the sentence you hear.* Play **TR: AB31.** (Why did people use to read by the fire at night?) When students have completed the sentence, say *What sentence did you write?* Begin the quiz when students respond with *Why did people use to read by the fire at night?* Say *Let's begin.* Play the rest of **TR: AB31.**
- **Speaking instructions** Point to the images at the bottom of p. 84. Say *Look at the pictures. Answer my questions. Use complete sentences. Now listen to an example.* Point to the umbrella. Ask *Is the umbrella a useful invention?* Say *Yes, it's a useful invention.*
- See page 90 of the Assessment Book for questions and expected student responses.

Assessment

Resources Assessment Book pp. 63–64, 84, 90, 93, 97; Audio CD TR: AB30, AB31

Be the Expert

Testing Tip

Review regularly. Review content regularly in class to help reinforce learning. Reviewing will also help students prepare for quizzes and tests.

Assess Unit Objectives

Ask questions such as the following:

- *Why did people use to read by candlelight?*
- *How did people move heavy things before they invented the wheel?*
- *Name a useful invention. How do you use it?*

Project For a theme-related closing activity, direct students to the Unit 2 Project Worksheet.

Vocabulary 1 a wheel, an invention, useful, a problem, a solution, an idea, imagination, invent, try, fail, succeed

Vocabulary 2 turn, lift, move, put, use

Grammar 1 describe habits in the past with *used to* + verb

Grammar 2 generalize using *you*

Song *Inventions*

Viewing inventions and solving problems

Meet the Explorer Aydogan Ozcan

Story Time *Sweet Surprises: Accidental Food Inventions*

Resources Student Book pp. 14–20, 23; Teacher's Resource CD-ROM: Graphic Organizers (Vocabulary log, Three-column chart)



Zoom In

Vocabulary

- Replay a vocabulary segment. Pause on a multiple-choice question before the answers are shown and see if students can answer it without reading the choices.

Grammar

- Freeze a frame of Grammar I. Ask *Does this show the past or today? What do people do today? What did people use to do?*

Song

- Play the song and have students sing along. Say *Listen. What actions did people use to do?* List the actions on the board. For each action, have students write what people do today. Point to each and ask *What invention helps us do this today?*

Viewing

- Play the viewing segment without audio. Have students identify each invention shown in the segment (airplane, car, wheel). Then replay the segment with sound. Ask students to identify one thing they learned about each invention after watching the video with sound.

Meet the Explorer

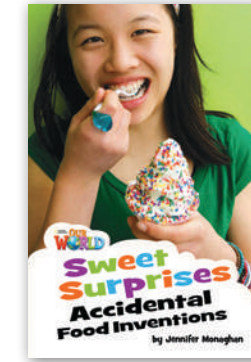
- Say *Aydogan Ozcan is working on an invention that turns a cell phone camera into a microscope. He is excited about it. Say Think about inventions we read about. Which ones are you excited about?*

Story Time

- View Story Time once with students. Then view it again and have students complete a three-column chart. Label the columns **Inventor**, **Invention**, and **How It Was Invented**. Pause the video after each invention and have students fill in the chart.

Sweet Surprises: Accidental Food Inventions

Some inventions, like the television and the car, are the result of planning and hard work. Other inventions are created by accident. Some of the most popular snacks and desserts that we enjoy today were invented this way.



Before You Read

- **Brainstorm** Have students list snacks and sweets that they enjoy. Say *Tell me about your favorite snack or dessert. Is it sweet or salty?* Then say *You're going to read about some popular snacks and desserts. They were all made by accident. The person didn't try to invent them. They just happened!*
- **Introduce the strategy** Write the words *cause* and *effect* on the board. Draw an arrow from *cause* to *effect*. Say *A cause makes something happen. The effect is what happens as a result of the cause.*
- Point to *effect*. Say *To find the effect, ask "What happened?"* Point to *cause*. Say *To find the cause, ask "Why did it happen?"*
- Show students a piece of chalk. Drop it and hold up the broken pieces. Ask *What happened?* (The chalk broke.) *Why?* (You dropped it.) Write *The chalk broke because I dropped it.* Write *effect* under *The chalk broke* and *cause* under *I dropped it.*
- Write a two-column chart on the board with the headings **What Happened (Effect)** and **Why It Happened (Cause)**. Say *As we read, we'll stop to write what happens and why it happens.*

While You Read

- Stop every few pages to help students identify and write causes and effects. Point out that the answer to a *why* question is a cause.
 - p. 4: *Why did Ruth Wakefield put the broken pieces of a chocolate bar into her cookie dough?*
 - p. 8: *What happened when Frank Epperson left a drink with a stick in it out in the cold?*

After You Read

- After finishing the text, have students write two questions using these sentence frames:
 - Why _____?*
 - What happened when _____?*
 Collect their questions and read them aloud to the class, calling on individual students to answer them.

Text Type nonfiction

Reading Strategy Identify Cause and Effect

Vocabulary an invention, invent, use, a problem, a solution, put, idea

Grammar describe habits in the past with *used to* + verb; generalize using *you*

Content Vocabulary *dessert*

Resources Video: Story Time; Classroom Presentation Tool: Story Time; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart)

Materials piece of chalk

Be the Expert

Reading Strategy

Cause and Effect Understanding cause and effect helps students know how events are related. Point out that some texts include words to signal cause-effect relationships, such as *because*, *as a result*, and *so*. Point out the word *so* in the last sentence on p. 8.

Text Background

Sweet Surprises: Accidental Food Inventions is a nonfiction text that gives true, real-life examples of inventions created by accident. Like many nonfiction texts, it includes a lot of information and facts. To help organize and present the information, nonfiction texts often use text features such as headings, photos, and pictures.

Student Book

TR: A11 Unit 2. 1 Listen and read.

Inventions are everywhere. Look around you. What inventions can you see?

Five thousand years ago, people had a problem. They couldn't move big or heavy things! Then someone found the solution—the wheel. It changed our lives. Imagine your life without electric lights. Before electricity, we didn't have useful things such as batteries, computers, and cell phones.

Inventors need imagination. Before the eraser, people used bread to erase writing! In 1839 Charles Goodyear had an idea. He invented the modern eraser.

The Wright brothers tried to fly many times, but they failed. Finally, in 1903, they succeeded. Now that we have planes, our world is very different.

TR: A12 2 Listen and repeat.

- an invention The eraser was a useful invention.
- a problem I have a problem. My invention isn't working.
- a solution Do you know a good solution?
- a wheel Wheels are the most famous invention.
- useful Umbrellas are useful in the rain.
- imagination My sister writes cool stories. She has a lot of imagination.
- an idea That was a good idea!
- invent Who invented electric lights?
- try What are you trying to do?
- fail I studied very hard, so I won't fail.
- succeed The Wright brothers succeeded.

TR: A13 Grammar

People **used to** erase writing with bread. We **didn't use to** have erasers. Why **did** people **use to** read by candlelight? They **didn't use to** have electric lights.

TR: A14 6 Listen and repeat.

- turn The wheels turn.
- lift Lift your arms and shake your legs.
- move Don't move. I'm taking a photo!
- use How do you use that toy?
- put Every morning I put my things in my backpack.

TR: A15 6 Complete. Then listen and check your answers.

The "hula hoop" is an old invention, but it's very popular today. It's fun and it's good exercise!

1. How do you use a hula hoop? It's easy. Follow these instructions.
2. Put the hula hoop on the ground. Stand in the middle.
3. Lift the hoop to your waist.
4. Move your waist in a circle. Don't hold the hoop!
5. The hoop turns round and round. Can you feel it?

TR: A16 7 Listen and stick. Put the stickers in order. Then tell your partner how to use this toy. Use the stickers to help you remember!

- Boy: What are you holding? Is it a new toy?
- Girl: No. It's old. It used to be very popular. It **moves** down the stairs by itself!
- B: Cool! Show me how to **use** it.
- G: It's easy. You **put** the toy at the top of the stairs... like this.
- B: Does it go down the stairs now?
- G: No. You have to **lift** it at the back. Like this. Then it **turns** over and over.
- B: That's cool! Let's go and show the others...

TR: A17 Grammar

You need to have imagination to invent things. **You** should always try again if **you** fail. What do **you** do with this invention? Do **you** play with it?

TR: A18 9 Listen, read, and sing.

Note: Lyrics for the song *Inventions* are on Student Book p. 93.

TR: A19 10 The Sounds of English /j/ yes

Listen to the underlined sounds. Say the words.
1. year; you 2. yellow; use 3. useful; used to

TR: A20 11 Listen and read.

Note: Text for the Reading *Creative Kids* is on Student Book p. 22.

Workbook

TR: 7 Unit 2. 7 Listen. Answer the questions.

- Boy: What's that, Irma?
- Girl: It's a new invention for the table. It's awesome.
- B: Really? How do you use it?
- G: Oh, Daniel. Use your imagination! It's easy!
- B: Explain it then, Irma.
- G: Well, imagine you want the sauce, but I have it, OK?
- B: OK.
- G: OK. So, I move it across the table to you—like this!
- B: Right. So the wheels turn. And now I have the sauce. So what?
- G: Well, now you put the sauce on your fries.
- B: Well, why do you need an invention for that? Why don't you just lift the bottle with your hand and give it to me?
- G: Because this is cool!
- B: Well, I think it's silly.

TR: 8 10 Play a game. Listen to the description of inventions. Check the box when you hear the description. Then circle the column that has three in a line.

Answer Key

Student Book

Unit Opener SB p. 14

1. a train 2. Answers will vary. 3. Answers will vary.

4 SB p. 18

A: Did you use to make; B: didn't use to have; A: did you use to text; B: didn't use to text, used to write

6 SB p. 19

1. use 2. Put 3. Lift 4. Move 5. turns

1. You put this in your mouth. It tells you if you have a fever. 2. When it rains, you put this over your head. You don't get wet. 3. You wear these when you have problems with your eyes. They help you see. 4. This is round. You find it on cars, bicycles, and skateboards. 5. You watch this at home. You can see lots of actors in shows. 6. When it is dark, you use this. It makes light. 7. You drink this when you have a cough. It's in a bottle. 8. This is very big and has wings. You fly in it. 9. You use this when you want to call your friends and talk.

TR: 9 11 Write and listen. Label the inventions. Then listen and write them in the song.

Note: Lyrics for the song *Inventions* are on Student Book p. 93.

TR: 10 12 Listen. Write the missing letters. Then rewrite the words that have the same beginning y sound that you hear in the word yes.

1. young 2. useful 3. under 4. yellow 5. used 6. yogurt 7. umbrella 8. yawn

TR: 11 13 Listen and read.

Note: Text for the Reading *Trains Make the World Go 'Round* is on Workbook p. 18.

7 SB p. 19

1. moves 2. use 3. put 4. lift 5. turns

Workbook

Go to pp. 207–208 for the Workbook Answer Key for this unit.

In This Unit

Theme This unit is about hobbies.

Content Objective

- Students will
- identify and describe hobbies and interests.

Language Objectives

- Students will
- discuss hobbies and interests.
 - give information about people.
 - describe and explain a hobby.

Vocabulary

Vocabulary 1 *collect, take photos, alone, an avatar, compete, a score, together, a controller, a screen, enjoy*

Vocabulary 2 *a comic book, a bug, a dinosaur, a fossil, a stuffed animal*

Grammar

Grammar 1 use defining relative clauses with *who*

Grammar 2 use direct and indirect objects

Pacing Guides

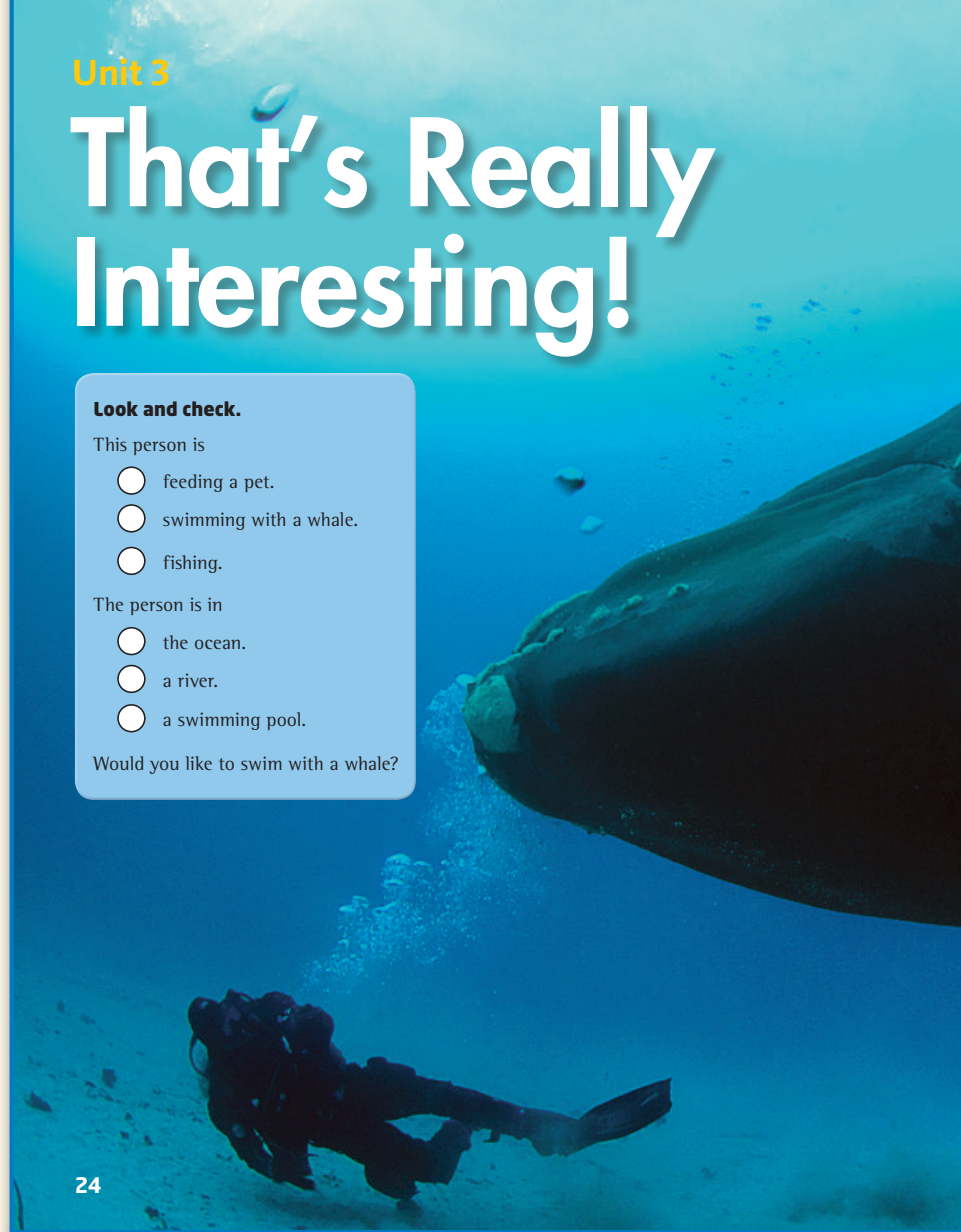
Mission Enjoy a hobby.

Unit Opener

Objective

- Students will
- discuss a photo.

Resources Video: Introduction; Classroom Presentation Tool: Unit Opener; Teacher's Resource CD-ROM: Home-School Connection Letter; Unit Opener Poster; World Map Poster



Introduce

- **Build background** Say *The name of our next unit is "That's Really Interesting!"* Say *What's interesting to me might not be interesting to you. We all have different hobbies, or things we like to do.*
- Say *Everyone stand up. I'll say some activities. Take a step forward when you hear an activity you think is interesting.* Say *I think baseball is interesting.* Act out throwing or hitting a ball. Pause for some students to step forward. Say *I think playing video games is interesting.* Act out using a video game controller. Continue with activities such as *going to a museum, fishing, playing an instrument,* and so on.
- Direct students' attention to the photo on pp. 24–25. Say *This photo shows a person doing a hobby. Let's talk about what it is.*

Be the Expert

About the Photo

This photo shows diver and photographer Brian Skerry with a southern right whale in the waters off New Zealand's Auckland Islands. These islands are home to a wide variety of different animals and plants.

Skerry has been diving for 30 years. According to Skerry, seeing the southern right whales was his best diving experience. He said that the beautiful white-and-gray whales were amazing. They came swimming over and looked up at him. Some were twice the size of his boat!

Scuba diving and photography are two popular hobbies. Skerry combines these hobbies to take interesting and important photos of ocean life.

Teaching Tip

Students may become interested in learning more about a topic that's presented in a unit, and decide they want more information about it. If students want to learn more about a topic, give them additional readings related to the topic, or help them use reliable print and online resources to research the topic. Encouraging students' interests will help them become active and enthusiastic learners and will expand their understanding of the world.



- Ask questions to encourage discussion of the photo:
 - What do you see in the photo?* (a person, a whale, water, sand, the ocean floor)
 - Where is the person?* (in the ocean, underwater)
 - What do you think the person is doing?* (swimming, looking at the whale, taking a photo of the whale)
- After students discuss the photo, say *This person's hobby is diving, or going into the ocean to see the plants and animals there. Do you think diving is interesting? Do you want to learn to dive? Why or why not?*
- Guide students through the activity on p. 24. Read each sentence stem and answer choice aloud. Explain the meaning of the answer choices if necessary. Call on individual students to say the answer they believe is correct. Then confirm the correct answer for each item.

Vocabulary 1

Objective

- Students will
- identify and use words to describe hobbies.

Vocabulary *collect, take photos, alone, an avatar, compete, a score, together, a controller, a screen, enjoy*

Resources Workbook pp. 20–21; Audio CD TR: A21–A22; Video: Vocabulary I; Classroom Presentation Tool: Vocabulary I; Teacher’s Resource CD-ROM: Graphic Organizers (Sunshine organizer), Activity Worksheet 3.1

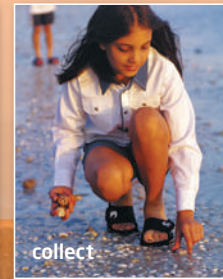
Related Vocabulary

seashell

1 Listen and read. TR: A21

2 Listen and repeat. TR: A22

Most people have a hobby. Some children **collect** things, play music, or grow vegetables. Creative people paint or **take photos**. Video games are popular, too.



Many video games are for one person. You play **alone**. But it’s more fun to play with a friend. Choose your **avatars**. Then **compete**. To win the game, you must get the highest **score**.

In other video games, you play **together** with a friend. You don’t compete. When you use the **controllers**, you can see your avatars move on the **screen**.

What hobbies do you **enjoy**?

26

enjoy an activity, you like doing it. Point to the photo of the boy. Say *He enjoys taking photos. It’s his hobby.* Ask *What activities do you enjoy?*

- **Explain** Point to the photo of the girl. Say *Some people enjoy collecting things as a hobby. When you collect something, you get many of the same kind of thing, such as rocks or coins.* Point out the children playing a video game on pp. 26–27. Say *Playing video games is another hobby that people enjoy.* Point to each term on p. 27, say it, and have students repeat.

Practice 1 2

- 1 Say *We’re going to read and listen to some information about hobbies. Read the paragraphs on page 26 as you listen.* Play TR: A21.

Be the Expert

Vocabulary Strategy

Using Context Using context involves reading the words, phrases, and sentences around the unfamiliar word. Surrounding text often contains clues to meaning, such as examples or definitions.

Students can use context to figure out the meaning of words such as the vocabulary word *alone*. First, have students reread the sentence on p. 26 that contains the word *alone*. Then have them read the sentence before it and find words that help them figure out the definition.

Formative Assessment

Can students

- identify and use words to describe hobbies?

Ask students questions such as *What hobbies do you enjoy? Do you do these hobbies alone or together with others?*

Review For additional practice, direct students to Activity Worksheet 3.1.



3 Work with a partner.

What did you learn?
Ask and answer.

- Discuss the paragraphs on p. 26. Ask questions: *What hobbies do some children have?* (collect things, play music, grow vegetables) *When you play a video game for one person, do you play alone or together?* (alone) *What must you do to win a video game?* (get the highest score)
- 2 Say *Now we’re going to hear words, and then listen to sentences with those words. Repeat each word and sentence after you hear it.* Play TR: A22.

Apply 3

- 3 Draw students’ attention to the model dialogue on p. 27 and read it with a student. Say *Think of some questions to ask about the new words. Look at the photos and words on pages 26 and 27 to help.*

- Pass out sunshine graphic organizers or draw one on the board for students to copy. Give students five minutes to write a question for each word, for example, *Who competes in a video game? How do you move your avatar on a screen?*
- Pair students. Have partners take turns asking and answering questions. When students finish, call out a target word. Have a student share a question about it. Repeat for other words.

Wrap Up

- Say *I need help. I’m looking for a hobby. I’ll tell you about myself. Tell me what hobby I might like.* Pretend to be different people and tell about yourself using the target words. For example, *I enjoy finding rocks and shells outdoors.* Have students suggest a hobby for each “person.”

Objective

- Students will
- give information about people using phrases with *who*.

Grammar use defining relative clauses with *who*

Academic Language *clause*

Content Vocabulary *trilobite*

Resources Workbook p. 22; Audio CD TR: A23; Video: Grammar I; Classroom Presentation Tool: Grammar I; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart)

Materials magazine photos of people doing various hobbies

GRAMMAR TR: A23

The person **who** has the highest score wins the game.
My friend **who** collects DVDs knows a lot about movies.

- 4 **Work in a group.** Ask questions. Write names. Then write about the people in your group.

Who ...	Name(s)
1. enjoys reading books?	
2. likes to compete in sports?	
3. likes to play video games?	
4. is interested in fossils?	
5. collects something?	

Sofia is someone who enjoys reading books.

- 5 **Read and talk.** Work in a new group. Read some of your sentences. Don't read the name. Guess!



28

Warm Up

- **Preteach** Write the word *who* on the board and have students read it aloud. Say *You can use who to ask a question about a person.* Ask *Who likes playing sports? Raise your hand.*
- Say *You can also use the word who to tell more about someone.* Write the sentence below on the board. Read the sentence. Then point to the underlined part and say *This part of the sentence tells more about (Lucia).*

(Lucia) is a student who likes playing sports.

- Erase (Lucia) and replace it with a boy's name. Then have students read the sentence aloud: (Alonso) is a student who likes playing sports. Point

out that *who* does not change. It stays the same whether the sentence is about a boy or a girl.

Present

- Point to the Grammar box on p. 28. Say the sentences, or play **TR: A23**. Have students repeat each sentence after they hear it. Ask *Who knows a lot about movies?* (my friend who collects DVDs) *Who wins the game?* (the person who has the highest score)
- Write these sentences on the board:

There is a boy in my class. He takes photos.
My sister who likes to paint is talented.

- Read aloud the first pair of sentences. Ask *Who takes photos?* (the boy) Point to the second sentence and say *You can join these sentences with who.* Erase the period and *He*. Replace these with *who*. Then read *There is a boy in my class who takes photos.*
- Then say *Who doesn't always join two sentences. It might just give more information about someone.* Point to the other sentence on the board. Say *In this sentence, who doesn't join two sentences. Who tells more about the sister.* Ask *Which sister is talented?* (the sister who likes to paint)

Practice

- Draw a two-column chart on the board. Label the first column **Student** and the second column **Hobby**. Call on students to name a hobby they have. Write students' names in the first column and their hobbies in the second column.
- Say *Choose two students from the chart. Write a sentence about each student and their hobby. Use the word who in each sentence.* Write these model sentences on the board:

Mira is a girl in my class who collects stamps.

Marco is a classmate who takes photos.

- Call on students to read one of their sentences to the class.

Apply 4 5

- 4 Divide the class into groups of three or four. Read the directions for Activity 4 on p. 28 aloud. Say *Take turns asking your group one of the questions in the Who column. Write the names of the people who answer "yes".* Then call on students to read aloud the questions. Make sure the students begin each question with the word *Who*. Point out the sample sentence at the bottom right corner of the chart.
- 5 Read the directions for Activity 5 and model the dialogue. Have students form new groups and complete the activity.

Wrap Up

- Say *Let's take a class survey.* Write *play video games, read books, and collect something* on the board. Leave space under each phrase. Then ask *Who plays video games? Raise your hands.* Count the number of raised hands and write the number on the board under the appropriate heading.
- Write on the board: *There are _____ students in class _____.* Have students use the information on the board and the word *who* to complete the sentence and say it aloud. For example: *There are 12 students in class who read books.*

Our World in Context

Fossils are parts of ancient animals and plants found in rocks on Earth. Fossils can provide important information about Earth's past. Paleontologists are scientists who collect and study fossils. Paleontologists carefully remove, or excavate, fossils from the earth.

Grammar in Depth

The pronoun *who* can be the subject of a clause that gives necessary information about something. For example: *My aunt who is creative takes photos.* The phrase *who is creative* gives information about the subject *aunt*. The pronoun *that* can also be used in this kind of clause: *People that are creative often take photos.* Both *who* and *that* are used to refer to people.

The pronoun *whom* can be used as a direct object. A direct object is a noun, pronoun, or noun phrase that names the person or thing that receives the action of the verb. For example, *The people whom we met were very nice.* In this sentence, *whom* is the direct object of the verb *met* in the clause *whom we met*. Using *whom* in this way is seen in formal English, but it is rarely used in everyday speech.

Formative Assessment

Can students

- give information about people using phrases with *who*?
Ask students questions such as *What do some of your family members enjoy doing? What do some of your friends like to do?*

Objective

- Students will
- identify and use words related to collecting.

Vocabulary a comic book, a bug, a dinosaur, a fossil, a stuffed animal

Resources Workbook p. 23; Audio CD TR: A24; Video: Vocabulary 2; Classroom Presentation Tool: Vocabulary 2; Teacher's Resource CD-ROM: Activity Worksheet 3.2

Materials teddy bear

6 Listen and repeat. Check T for True and F for False. TR: A24



a comic book



a bug



a dinosaur



a fossil



a stuffed animal

1. She's scared of bugs.
2. She thinks dinosaurs are boring.
3. She knows a boy who collects comic books.
4. Her brother collects fossils.
5. Her dad gave her a stuffed animal for her birthday.

- T F
T F
T F
T F
T F

7 Work with a partner. It's party time. What present would you like most? Stick. Ask and answer.

What gift would you like most?

I'd like a pair of socks.

Socks are boring! I'd like a fossil!

1

2

3

4

5

29

Warm Up

- Say *Let's act out some hobbies we know.* Call out *take photos* and *collect things*. Have students act each hobby out. Say *We can collect different things.* Hold up a teddy bear. Say *What's this?* (a teddy bear) *A teddy bear is a kind of stuffed animal. Some people collect stuffed animals. Collecting things is a hobby.*

Present

- Say *Turn to page 29.* Point to each photo and say the target word aloud. Have students repeat the words.
- **Explain** Point to the photo of the dinosaurs. Say *These are toy dinosaurs. There are no real dinosaurs today. A dinosaur is a kind of animal.*

Dinosaurs lived on Earth a long time ago. How do we know there were dinosaurs long ago? We have fossils. Point to the photo of a fossil. Say Fossils can be marks or bones from animals in the past.

- Say *I like to read stories about superheroes. I collect comic books.* Say *Look at the photos. Pick an object that you want to collect.* Ask different students *What do you want to collect?* Have students use a target word to write a sentence about what they want to collect. Provide the sentence frame *I want to collect _____.*

Practice 6

- Say *Look at the photos on page 29.* Ask questions such as: *Which one is something you can read?* (a comic book) *Which one is an animal that is not alive anymore?* (dinosaur) *Which one is a soft toy?* (a stuffed animal) *Which one looks like a flat rock?* (a fossil) *Which one is something that is alive today?* (a bug)
- 6 Play TR: A24. Have students repeat each word and sentence aloud.
- Have students read through items 1–5 silently. Say *Underline the new word in each sentence.* Replay TR: A24. Pause after each sentence. Have students look for the item that uses the target word they heard. Say *Check T for True or F for False.*
- Review the correct answers. Help students change false answers to make them true. For example, for item 1, ask *How does she feel about bugs?* (She loves bugs.) Replay TR: A24 as needed.

Apply 7

- 7 Say *Let's do a sticker activity.* Have students find the stickers and name the objects on each sticker. Review *top*, *doll*, and *socks* as necessary. Then pair students. Say *It's your birthday party. Look at the stickers. Which gift would you like most? Stick your favorite present in Box 1. Put your next favorite gift in Box 2, and so on, until you get to Box 5. Stick your least favorite gift there.*
- Point to the first speech bubble. Say *Your partner asks what gift you like most. Name what you put in Box 1. Your partner says something about the gift. Then she says what she would like most.* Model the dialogue with a student. Give students time to stick and talk. Have students switch partners and continue until they have completed the activity.

Wrap Up

- Have students stand in a circle. Ask a student *What do you like to collect?* Have the student use target words in his response. That student will then ask the student next to him the same question. Continue until each student has had a turn.

Teaching Tip

Students use their senses to learn. Some students learn new words and concepts best when they can associate them with visual cues. Help these students by showing them photos or illustrations of target words and structures.

Other students learn new words and ideas best when they can listen to them. These students will benefit from hearing information repeated multiple times in different contexts.

Students also learn through moving their bodies. Encourage students to come up with actions they can act out and remember for new words and ideas. For example, a student might act out turning the pages in a book to remember the target word *comic book*.

Formative Assessment

- Can students
- identify and use words related to collecting?
- Ask questions such as *What do you like to collect? How do people learn about dinosaurs?*

Review For additional practice, direct students to Activity Worksheet 3.2.

Objective

- Students will
- identify and use direct and indirect objects in a sentence.

Grammar use direct and indirect objects

Academic Language *direct object, indirect object*

Resources Workbook p. 24; Audio CD TR: A25; Video: Grammar 2; Classroom Presentation Tool: Grammar 2; Teacher's Resource CD-ROM: Activity Worksheet 3.3

Materials toy dinosaur or a picture of a dinosaur; scissors; tape; coin

GRAMMAR TR: A25

My dad gave this fossil **to me**. = My dad gave **me** this fossil.

My mom bought stuffed animals **for them**. = My mom bought **them** stuffed animals.

Show the comic book **to James**. = Show **James** the comic book.

8 Read and write. Rewrite the sentences.

- When my brother was in the hospital, my uncle gave a stuffed animal to him.
When my brother was in the hospital, my uncle gave him a stuffed animal.
- My cousin sent a dinosaur book to him.

- He became friends with two kids and gave two comic books to them.

- Grandma sent a present to him, and he wrote a letter to her.

9 Play a game. Cut out the game board and the cube on page 101. Work with a partner. Take turns.



30

Warm Up

- Preteach** Hold up a toy dinosaur or a picture of a dinosaur. Ask *What's this?* (a dinosaur) Call a student up to the front of the room. Hand him the dinosaur. Say *I gave the dinosaur to (Aziz). I gave (Aziz) the dinosaur.* Have students repeat after you.

- Write these sentence frames on the board:

_____ gave the _____ to _____.

_____ gave _____ the _____.

- Call another student up to the front of the room. Have the first student give the dinosaur to the second student. Have the class complete both sentences to describe the action: (Aziz) gave the dinosaur to (Leila). (Aziz) gave (Leila) the dinosaur.

Present

- Point out the Grammar box on the top of p. 30. Play **TR: A25**. Point to the first two sentences and ask *What did my dad give?* (this fossil) *The fossil is what my dad gave. Gave is the action. The word fossil receives the action.*
- Then ask *Who did my dad give the fossil to?* (me) *My dad gave it to me. Gave is the action. The word me tells who received the action or item.* Read aloud both sentences again and say *Both sentences mean the same thing.*
- Ask these questions about the other sentences in the Grammar box: *What did my mom buy?* (stuffed animals) *Who did she buy the stuffed animals for?* (them) *What did you show?* (the comic book) *Who did you show it to?* (James)

Practice 8

- 8 Point out Activity 8 on p. 30. Read the directions aloud. Say *Read items 1–4. Use the sentences in the box on the top of the page to help you rewrite each sentence. Item 1 is done for you.* Point out that in the rewritten sentence, *him* now appears after *gave*, and the word *to* is gone.
- Have students complete items 2–4. ✓ Say a sentence such as the following and have students state the sentence in a different way. For example, say *My brother gave a stuffed animal to me.* (My brother gave me a stuffed animal.) If students have trouble, ask *What word do you need to take away? Where does me belong in the sentence?*

Apply 9

- 9 Pair students. Direct them to p. 101. Have partners cut out the game board and the cube. Show students how to fold and tape the cube. Then have two students read the model dialogue on p. 30 aloud. Say *Say a sentence for each picture you land on. In your sentence, say the name of the thing in the picture, and who gave it to you.* Provide these sentence frames:

My friend gave _____ (a toy dinosaur).

My friend gave (a toy dinosaur) to _____.

- Point out the blue box next to the mascots. Say *When you roll the cube and it lands on me, move a space on the board. When the cube lands on him/her/them, you don't move any spaces.* Demonstrate the game. Roll the cube until it lands on *me*. Use a coin as a game piece. Move the coin one space on the board. Model a sample sentence by saying *My sister gave a toy bug to me. She gave me a toy bug.* Explain that the first student to get to the end of the board wins.

Wrap Up

- Group students. Have group members give one another classroom items such as pencils or books. Have groups use the student's name and the classroom item to say two sentences describing their actions.

Grammar in Depth

In a sentence, a direct object is a noun, pronoun, or noun phrase that names the person or thing that receives the action of the verb. An indirect object is a noun, pronoun, or noun phrase that names the person or thing that receives what is being given or done.

In English, the word order in most sentences is subject, verb, direct object. When an indirect object is added to a sentence, it can appear before the direct object. For example, *I gave Pedro the book.*

An indirect object can also appear after the direct object. For example, *I gave the book to Pedro.* The word *to* goes before the indirect object when it appears after the direct object in a sentence.

Formative Assessment

Can students

- identify and use direct and indirect objects in a sentence?
- Ask students questions such as *What presents did you get for your last birthday? Who gave you each present?* Make sure students answer in complete sentences.

Review For additional practice, direct students to Activity Worksheet 3.3.

Song - The Sounds of English

Song

Vocabulary

Vocabulary 1 a score, collect, enjoy, compete, take photos, a screen, alone

Vocabulary 2 a fossil, a comic book, a stuffed animal, a bug, a dinosaur

Grammar

Grammar 1 use defining relative clauses with *who*

Grammar 2 use direct and indirect objects

Resources Workbook p. 25; Audio CD TR: A26; Video: Song; Classroom Presentation Tool: Song; Teacher's Resource CD-ROM: Activity Worksheet 3.4

The Sounds of English

Resources Workbook p. 25; Audio CD TR: A27; Classroom Presentation Tool: The Sounds of English; Picture Cards 98–100, 103, 105–112; The Sounds of English Card 39

10 Listen, read, and sing. TR: A26

What's Your Hobby?

What's your hobby?
What do you like to do?
What's your hobby?
I have a hobby, too!

The boy who has the highest score
wins the video game.
The girl who collects a fossil
wants to learn its name.

THE SOUNDS OF ENGLISH TR: A27
boy

11 Listen and say. Underline the words that have the sound that you hear in *boy*. How fast can you say the sentence?

The noisy boy enjoys stuffed toys.

31

Use the Song 10

- **Activate prior knowledge** Ask *What are some of your hobbies?* List students' responses on the board. Point to the list and say *Look at these hobbies. Which new hobby do you want to try? Why do you want to try it?* Ask *Do you want to do your new hobby alone or together with other people?*
- Ask *In what hobbies do people compete?* Add any new hobbies that students name to the list on the board. Ask *Who likes to compete?* Call on a student and ask (*Jaime*), *what hobby do you compete in?* Have other students name the hobbies they compete in.
- Turn to pp. 26–27 and have students look at the hobbies pictured. Say *Which hobbies on the board are also on this page?*
- **Explain** Have students look at p. 31. Say *This girl has a hobby. Her hobby is bonsai.* Ask *Has anyone ever seen a bonsai plant?* Explain that bonsai is growing small trees or bushes in a pot or dish. Point to the scissors in the photo and tell students that by cutting off the tips of the branches, the girl will keep the tree from getting too big. It will look full grown but keep its small size.
- **10** Say *Let's listen, read, and sing. I'll play part of the song. Then we'll read the words and sing while I play it again.* Have students close their books. Play the first eight lines of the song (TR: A26). Tell students to tap on their desks when they hear new vocabulary words. (*score, collects, fossil*) Then have students open their books to p. 31. Play the eight lines again as students sing along.

Extend

- Tell students the rest of the song names other hobbies and other vocabulary words. Say *Let's listen.* Play *What's Your Hobby?* all the way through as students follow along in their books. Complete song lyrics are on p. 94.
- Say *Use the song to answer these questions: Who wins the video game?* (the boy who has the highest score) *Who can see dinosaurs in dreams?* (the girl who reads about dinosaurs) *Who sees something on a screen?* (the boy who takes a photo)
- Play TR: A26 again. Sing the chorus alone. Then point to the class and have them join in to sing the next eight lines of the song. Repeat with the second chorus and the rest of the song.

The Sounds of English: /ɔɪ/ as in *boy* 11

- **11** Hold up pictures of toys (for example, stuffed animals, trucks and cars, dolls, board games, puzzles) or show some of the following Picture Cards: *ball, bike, car, kite, top, train, truck, game, doll, puzzle, robot, teddy bear.* Ask *What do we call all these things?* Say *That's right. They're toys.* Write *toy* on the board, say it, and have the class repeat. Underline *oy*. Then say the word again, carefully enunciating the /ɔɪ/ sound.
- Say *Now let's listen to other words that have the same /ɔɪ/ sound you hear in toy.* Play TR: A27 once while students listen. Then say *Let's listen and say.* Play TR: A27 again and have students repeat the sentence.
- Write *The noisy boy enjoys stuffed toys.* on the board and call on students to come up and underline the words with the /ɔɪ/ sound. (*noisy, boy, enjoys, toys*) Then have student volunteers take turns standing and saying the sentence as fast as they can. Tell them they have to try to clearly pronounce each word.
- To make sure students understand that *oi* can make the same sound you hear in *toy*, write these sentences on the board:

Flip a coin and you can join.

Use your voice to make a choice.

Read each sentence and have students raise their hands if they hear the target sound. Say *Look and listen. Raise your hand if you hear /ɔɪ/ as in toy.* Students should raise their hands *for coin, join, voice, choice.* Then divide the class into two teams and assign one of the sentences on the board to each team. Have teams take turns reading their sentence aloud together as quickly as they can.

Be the Expert

About the Photo

In the photo, the girl is caring for a bonsai tree. Bonsai are small trees grown in pots and kept indoors. The word *bonsai* means "tray-planted" in Japanese. It refers to both the trees themselves and the practice of taking care of them.

A person skilled at cutting and shaping bonsai can make small trees look like trees seen in nature. For example, bonsai can be made to look like tall trees standing upright in a field, or trees that are bent due to age or weather conditions. Bonsai is a popular hobby in Japan and in many other parts of the world.

The Sounds of English Cards

You can use The Sounds of English Card 39 to teach the /ɔɪ/ sound. The card and corresponding audio are available on the *Explore Our World* website.

Objectives

- Students will
 - read to learn about a new hobby.
 - talk about the steps of a hobby.
 - put a sequence of steps in order.

Reading Strategy Identify Sequence of Events

Academic Language *sequence, direction*

Content Vocabulary *letterbox, rubber stamp, clues, website, compass, hometown, press, wrap*

Resources Workbook pp. 26–27; Audio CD TR: A28; Classroom Presentation Tool: Reading; World Map Poster; Teacher’s Resource CD-ROM: Graphic Organizer (Flowchart, Three-column chart)

Materials digital camera (*optional*)

12 Listen and read. TR: A28

Hide and Seek

“Letterboxing” is a fun outdoor hobby. Here’s how it works: People hide a box. Inside the box, they put a rubber stamp and a notebook. They post clues on websites to help you find the box.

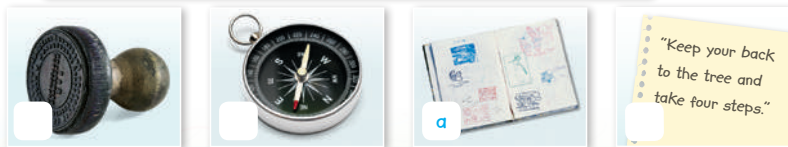
You look on the website and read the clues. Then you look for the letterbox! You need to have your Internet clues, a pen or pencil, a notebook, and a rubber stamp. You may need a compass, too.

When you find the letterbox, you look for the notebook inside. Then you write your name, your hometown, and the date. You press your rubber stamp on the page. Then you take the stamp from inside the box and stamp it in your notebook. Finally, you wrap the box carefully. You leave it where you found it for another person to find. Try it! You will enjoy it!

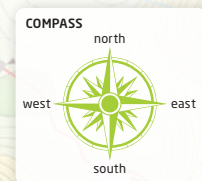


13 Write. Label the pictures.

- a. notebook b. rubber stamp c. clue d. compass



14 Work in a group. Discuss what people should take with them when they go letterboxing.



A Japanese sailor sent a message in a bottle when his boat was sinking. The message asked for help. About 150 years later, the bottle arrived in the town where he was born!

Warm Up

- **Act it out** Say *One of my favorite hobbies is taking photos.* Take out a digital camera and act out taking a photo of the class. Talk about the steps you take as you act them out. Say *First, I find something to take a picture of.* Point to the class. Say *Then I get the camera ready. Next, I press the button to take the picture. Last, I put the picture on the computer and print it.*
- Say *Now, we’re going to read about the steps of another person’s hobby.*

Present 12

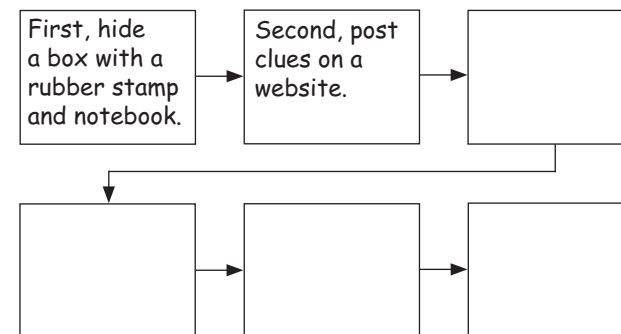
- **12 Explain** Say *Turn to page 32. Say Look at the title, the photos, and the map. What do you think this reading is going to be about?* Listen to answers from several students. Then say *We’re going to*

learn about a hobby called letterboxing. People hide a box and others have to find it.

- Play **TR: A28.** Pause the audio at the end of each paragraph to ask questions:
 - Paragraph 1:** *What is letterboxing?*
 - Paragraph 2:** *What things do you need for letterboxing?*
 - Paragraph 3:** *What do you do when you find the letterbox?*
- **Graphic literacy** Point to the compass at the bottom of p. 32. Have them use the compass to point in each direction as they say the words aloud. Display the World Map Poster. Say *Look at the world map. Find the compass.* Have students use the compass to identify places on the map. Ask questions such as *Name a country that’s north of China.* (Russia, Mongolia, etc.)

Practice

- Draw a flowchart on the board and give each student a copy of the flowchart graphic organizer. Play **TR: A28** again and have students read along. As they read, have them fill in the steps in letterboxing on their charts. Model completing the first two steps. Pause the audio as necessary to allow students time to fill in their charts.



- Call on students one at a time to read the steps of letterboxing that they filled in during the Reading. Add them to the flowchart on the board. If students disagree with any of the steps, replay **TR: A28** or reread “Hide and Seek.”
- When the chart on the board is complete, review the correct order of steps as a class. Then have students revise their own charts.

Apply 13 14

- **13** Direct students’ attention to Activity 13 on p. 32. Say *Read each label in the box. Look at each photo. Decide which label goes with each photo. Write the letter of the correct label in the box. Then, cross out the word. The first one is done for you.* Point out the crossed-out label *notebook* and the photo of the item.
- After students finish, say each word aloud. Have students point to the photo as you say it. Walk around the room to check that students are pointing to the correct photo.
- **14** Divide the class into small groups. Have students read the directions for Activity 14. Say *Use your flowcharts and the photos on page 32 to help you. Include other items you think would be helpful. Make a list.* Have groups share their lists with the class.

Wrap Up

- Have students choose an item from the list they made for Activity 14 and write a sentence about why the item is or isn’t important for letterboxing. Call on students to read their sentences.

Our World in Context

Letterboxing is a hobby that combines hiking and treasure hunting. People often use maps or a compass when they do this hobby. According to legend, letterboxing originated in southwest England in 1854, when a nature guide hid a card with his name on it in a jar in an outdoor area and encouraged others to do the same.

People then started leaving postcards with their addresses or notes in the jar, hoping that the next visitor would mail them back. Letterboxing is becoming a popular hobby, particularly in North America.

Reading Strategy

Identify Sequence of Events Identifying the sequence of events in a story or nonfiction text can improve students’ reading comprehension by helping them to follow the order of points or ideas in the text.

Tell students that when they read, they can ask questions such as *What happens first? Then what happens? What happens last?* to identify the sequence of events. They can also look for signal words such as *first, next, before, after, then, finally, and last.*

Formative Assessment

- Can students
- read to learn about a new hobby? Have students reread the first paragraph on p. 32. Ask *How does letterboxing work?*
 - talk about the steps of a hobby? Ask students questions such as *What is one hobby you have? What steps do you take to do this hobby?*
 - put a sequence of steps in order? Tell students that some people collect bugs as a hobby. Write these steps on the board. Then have students put them in the correct order:
 - Study the bugs. (2)
 - Describe what you notice about the bugs. (3)
 - Find different bugs. (1)

Mission

Mission Enjoy a hobby.

Objective

- Students will
- share ideas.

Resources Video: Meet the Explorer; Classroom Presentation Tool: Mission; Mission Poster

Be the Expert

Meet the Explorer

Paleontologist Jørn Hurum collects and studies fossils. He studies fossilized bones that have been buried for millions of years. Each August, Hurum leads a team to a part of Norway located far north of the Arctic Circle. For about three weeks, there's very little snow. The land has almost no plants, and a lot of rocks are exposed, making it relatively easy to find fossils.

Hurum and his team have found about 60 skeletons of sea reptiles in a very small area. Predator X is part of a huge sea reptile called a pliosaur. During the time of the dinosaurs, these 50-foot reptiles hunted for prey in the cold ocean waters.

About the Photo

This photo shows ammonite fossils. Ammonites looked like squids and lived inside ring-shaped shells. These creatures first appeared about 240 million years ago. Ammonites lived in large groups called *schools*. They became extinct with dinosaurs, about 65 million years ago.

Ammonite fossils are some of the most common fossils found today. Scientists use the different shapes and sizes of ammonite shells that appeared and disappeared through the ages to tell how old other fossils are.

Enjoy a hobby.

What hobby would you like to try? Why?

Ammonite fossils

NATIONAL GEOGRAPHIC Jørn Hurum
Paleontologist
Emerging Explorer

"As a child, I felt very alone with my interest in fossils. Finally, at age 13, I discovered there was a museum in Norway that actually employed people to study fossils."

33

Mission

- Have students turn to p. 33. Read the sentence at the top of the page. Say *Remember that to enjoy doing something means you really like doing it. Doing this activity makes you feel happy.*
- Call on a student to read the quote at the bottom of the page. Then ask *What was Jørn Hurum's hobby as a young boy?* (fossils) Ask *How was his experience with his hobby different from most other young people's?* (He found out his hobby could be his job.)
- Remind students that there are many different kinds of hobbies to explore and enjoy. Encourage a discussion of hobbies with questions such as:

What are some hobbies you enjoy?

What do you like about each hobby?

What hobby would you like to try? Why?

Give the Unit Quiz

- Hand out the Unit 3 Quiz. Have students scan the pages. Say *Look at the directions, examples, questions, and pictures. Think about what you know and what you've learned.*
- Give students two or three minutes to preview the test.
- **Listening instructions, Section I** Point to pictures on page 65. Say *Look at these pictures.* Point to letters. *There is a letter next to each picture. Write the letter that matches the sentence you hear.*
- Say *Now listen to an example.* Play **TR: AB32**. (They're playing a game together.) When students have written a letter, ask *What letter did you write?* When students respond with the letter G, begin the quiz. Say *Let's begin.* Play the rest of **TR: AB32**.
- When students have completed Section I, have them put down their pencils. Say *Now you're going to read and write.* Read the directions for Section 2 aloud. Ask *What do you have to do?* (Complete the sentences. Use *who* and the words in parentheses.) Repeat the process for Sections 3 and 4. (3: Rewrite the sentences. Use words from the box. 4: Read. Circle *True* or *False*.)
- Have students complete Sections 2–4 independently.
- **Listening instructions, Section 5** Read the directions aloud. Ask *What do you have to do?* (Listen. Read. Complete the sentences.)
- Say *Now listen to an example.* Play **TR: AB33**. (What hobbies do you enjoy?) When students have completed the sentence, say *What sentence did you write?* Begin the quiz when students respond with *What hobbies do you enjoy?* Say *Let's begin.* Play the rest of **TR: AB33**.
- **Speaking instructions** Point to the image at the top of p. 85. Say *Look at the picture. Answer my questions. Use complete sentences. Now listen to an example.* Point to the screen. Ask *What's this?* Say *It's a screen.*
- See p. 90 of the Assessment Book for questions and expected student responses.

Assessment

Resources Assessment Book pp. 65–66, 85, 90, 93, 97; Audio CD TR: AB32, AB33

Be the Expert

Testing Tip

Be prepared. Before any test, think about what will be needed for the testing situation. Bring extra pencils, scrap paper, and erasers. Plan for what students will do after the test while other students are finishing. Bring English magazines or reading materials that students can use after they finish their tests.

Think about how students should ask questions during tests (raising their hands, coming to the teacher's desk, etc.), whether or not they are allowed to write on paper copies of the test, what they should do with their other books and school materials during testing, and how/if they should turn in their test when they are finished. Write the directions and guidelines on the board before the testing session and state them verbally, so that testing procedures are clear to all students.

Assess Unit Objectives

Ask questions such as the following:

- *What are your hobbies?*
- *Do you like to read comic books? Why?*
- *Do you play games with friends? Who usually wins? Why do they win?*

Project For a theme-related closing activity, direct students to the Unit 3 Project Worksheet.

Vocabulary 1 *alone, together, taking photos, competing, collect, a screen, a controller, an avatar, a score, enjoy*

Vocabulary 2 *a bug, a fossil, a dinosaur, a stuffed animal, comic books*

Grammar 1 use defining relative clauses with *who*

Grammar 2 use direct and indirect objects

Song *What's Your Hobby?*

Viewing hobbies you can do alone and together

Meet the Explorer Jørn Hurum

Story Time *Hurum's Hobby*

Resources Student Book, pp. 24–30, 33;
Teacher's Resource CD-ROM: Graphic Organizers (T-chart)



Zoom In

Vocabulary

- Play a vocabulary segment. Pause the video on each image shown in the frame, making sure to do so before the caption appears. Ask *What word do you think the photo shows?* Have students write the word and check their work after the caption is played.

- Pause the video on each caption. Have students read the word aloud and then use the word in a short sentence.

Grammar

- Play the Grammar I segment. Pause after each person is introduced and have students use *who* to say an additional sentence about each one. (*Ana is the girl who has long red hair.*)

Song

- Divide the class in half. Assign each half one verse of *What's Your Hobby?* Play the song. As each half of the class sings along, have the other half raise their hands when they hear a target word.

Viewing

- Play the viewing segment once without the audio. Pause for each scene and ask *What do you see?* Play it again, with the audio, and have students compare what they wrote with the narration.

Meet the Explorer

- Say *Jørn Hurum is a scientist who collects and studies fossils. He says fossils make him feel happy. What hobbies make you feel happy?*

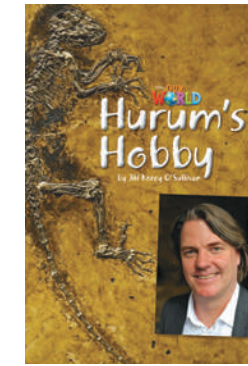
Story Time

- View Story Time once with the class.

- Replay the video. Pause and ask questions such as *What was Jørn Hurum's hobby as a child?* (collecting fossils) *What is Hurum's job today?* (He's a paleontologist.)

Hurum's Hobby

Many kids have a hobby. Some kids leave their hobby behind as they grow up, but others turn their hobby into the work they do as an adult. Jørn Hurum turned his hobby of collecting fossils into a career that he loves.



Before You Read

- Activate Prior Knowledge** Tell students about hobbies that you had as a child. Say whether or not you still do them. Then ask *What's your favorite hobby? Do you think you could do this hobby as a job when you grow up? Why or why not?* Get responses from several students.

- Introduce the Strategy** Say *Asking questions can help you understand what you read.* Read aloud the summary on the back cover. *The text mentions Jørn Hurum's hobby. What is his hobby? I'll read the text to find out.*

- Say *As we read, let's use a chart to write questions about the text.* Draw a two-column chart on the board with the headings **Question** and **Answer**. *I'll write my question in the first column.* Write *What is Jørn Hurum's hobby?* under **Question**.

- Say *As we read, we'll stop to ask questions about what we read. Then we'll look for answers to our questions as we continue reading. We'll write these answers in the chart.*

While You Read

- Stop after every few pages to ask students what questions they have about the text. Remind students that a question can begin with *who, what, when, where, why, and how*. Pause after p. 4 and say *Let's ask a question with who. Who read a book about fossils?* Write the question in the chart. Say *Let's ask another question using what.* Call on students to ask questions with *what*, such as *What's a fossil?* Write students' questions in the question column. Say *You'll answer these questions after we finish reading.*

After You Read

- After finishing the biography, have students look at the questions in the first column of the chart. For each question, ask *Was that question answered in the text? What was the answer?* Call on students to say the answers. Have students write the responses in the right-hand column of their charts.

Text Type biography

Reading Strategy Ask Questions

Vocabulary *enjoy, collect, a bug, a fossil, alone, a dinosaur*

Grammar use defining relative clauses with *who*

Resources Video: Story Time;
Classroom Presentation Tool: Story Time;
Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart)

Be the Expert

Reading Strategy

Ask Questions Asking questions during reading is a way of engaging with the text. When students are interested, their questions show that they want to know more. (*Where did he go to school? What did he have to study to become a paleontologist?*)

Asking questions about unfamiliar words or difficult paragraphs can help students check their understanding. (For example, *What is a paleontologist?*) Asking questions after reading can help students confirm their understanding.

Text Background

Hurum's Hobby is a biography. In a biography, an author tells the true story of another person's life.

Tell students that when they read a biography, they will learn such things as when and where the person was born, what his childhood was like, what kind of schools he went to, what he was interested in as he was growing up, what work he did as an adult, and why he is important. Ask students which of these topics is in Hurum's biography.

Student Book

TR: A21 Unit 3. 1 Listen and read.

Most people have a hobby. Some children collect things, play music, or grow vegetables. Creative people paint or take photos. Video games are popular, too.

Many video games are for one person. You play alone. But it's more fun to play with a friend. Choose your avatars. Then compete. To win the game, you must get the highest score.

In other video games, you play together with a friend. You don't compete. When you use the controllers, you can see your avatars move on the screen.

What hobbies do you enjoy?

TR: A22 2 Listen and repeat.

collect	What do you collect?
take photos	I love to take photos of animals.
alone	I like to play video games alone.
an avatar	Can I see your avatar?
compete	Do you like to compete?
score	What's the score?
together	Let's play my new video game together.
a controller	There are three controllers in this game.
a screen	Look at the screen.
enjoy	Do you enjoy video games?

TR: A23 Grammar

The person **who** has the highest score wins the game.

My friend **who** collects DVDs knows a lot about movies.

TR: A24 6 Listen and repeat. Check T for True and F for False.

a comic book	A boy in my class collects comic books.
a bug	Some people are scared of bugs, but I love them.
a dinosaur	I think that dinosaurs are really interesting.
a fossil	My brother collects old fossils.
a stuffed animal	My mom gave me a stuffed animal for my birthday.

TR: A25 Grammar

My dad gave this fossil **to me**. My dad gave **me** this fossil.

My mom bought stuffed animals **for them**. My mom bought **them** stuffed animals.

Show the comic book **to James**. Show **James** the comic book.

TR: A26 10 Listen, read, and sing.

Note: Lyrics for the song *What's Your Hobby?* are on Student Book p. 94.

TR: A27 11 The Sounds of English /ɔɪ/ boy

Listen and say. Underline the words that have the sound you hear in *boy*. How fast can you say the sentence?

The noisy boy enjoys stuffed toys.

TR: A28 12 Listen and read.

Note: Text for the Reading *Hide and Seek* is on Student Book p. 32.

Workbook

TR: A12 Unit 3. 5 Listen. Look at the avatars. Write the number (1-5).

1. This is a good avatar for someone who likes teddy bears. 2. This avatar is wonderful for people who like animals. 3. I like this avatar. It's great for people like me who enjoy soccer. 4. This is a good avatar for someone who likes to compete. And win! 5. This is great for my friend who likes to take photos.

TR: A13 8 Listen. Number the order that Irma talks about these toys (1-5).

Girl: Excuse me. I'm looking for a gift for my brother.

He really likes animals.

Adult: Well, we have some wonderful stuffed animals. They're fun, popular—and they don't cost too much money.

G: Hmm... I think they're really cute, but they're for young kids, really. He's 12.

A: I see. Well, how about the dinosaurs? They're great. You make them yourself!

G: Really? He likes to make things. He has a lot of imagination. But dinosaurs are a bit old-fashioned. Do you have something more modern?

A: The bugs are very modern and funny. They move.

G: Really? That's amazing. He'd like that.

A: I think you should buy them! You can buy some batteries to put in them, too.

G: Hmm, they're very expensive. Do you have anything else like that?

A: Well, we also have a fossil collection.

G: Hmm, I'm not sure he likes fossils... I know! I'll buy him some *ScienceMan* comic books. They're the easiest.

TR: A14 9 Listen again. Underline.

TR: A15 12 Listen to the song. Match the sentence parts.

Note: Lyrics for the song *What's Your Hobby?* are on Student Book p. 94.

TR: A16 13 Listen and write. Listen to the chorus. Cross out the extra words. Then write your own chorus.

What's your hobby?

What do you like to do?

What's your hobby?

I have a hobby, too!

TR: A17 14 Listen. Write the missing letters to make a sound like *oy* in the word *enjoy*. Then rewrite each word under the correct spelling.

1. enjoy 2. oil 3. toy 4. choice 5. noise 6. coin 7. boy 8. joy

Answer Key

Student Book

Unit Opener SB p. 24

swimming with a whale; the ocean

6 SB p. 29

1. F 2. F 3. T 4. T 5. F

8 SB p. 30

1. When my brother was in the hospital, my uncle gave him a stuffed animal. 2. My cousin sent him a dinosaur book. 3. He became friends with two kids

TR: A18 15 Listen and read.

Video Games: Then and Now

In the late 1950s, a scientist invented the first video game. It was a simple table tennis game. It wasn't until the 1970s that video games became popular. Gamers used to pay to play games that were short and slow. They had to go to video arcades, which were large rooms full of machines. This changed in 1972 with the invention of the first home video game. Gamers could finally play at home! Soon, people wanted to play outside the home, too. The first successful handheld game came out in 1989. After that, people could play games almost everywhere.

The invention of the Internet in the mid-1990s changed gaming forever. Thanks to the Internet, multiplayer games became very popular. Gamers could compete online against people all over the world! Then came the modern game consoles in the late 1990s. Suddenly, video games became popular with everyone. For the first time, people saw video games as more than a hobby. It was a way to learn or become healthy. Even schools and hospitals began to use them! What's next?

and gave them two comic books. 4. Grandma sent him a present, and he wrote her a letter.

11 SB p. 31

noisy, boy, enjoys, toys

13 SB p. 32

b (rubber stamp), d (compass), a (notebook), c (clue)

Workbook

Go to pp. 209–210 for the Workbook Answer Key for this unit.

The Science of Fun

Look and answer.

1. Name some of the things you see in the photo.
2. What is the man doing?
3. What is the man thinking?
Write a caption for the photo.

34

In This Unit

Theme This unit is about actions in sports and hobbies that use force.

Content Objective

- Students will
- identify and describe actions that use force.

Language Objectives

- Students will
- talk about actions that use force.
 - discuss definitions.
 - read a text and retell the information.

Vocabulary

Vocabulary 1 a force, happen, push, pull, a skater, forward, backward, spin, fall over, balance

Vocabulary 2 away from, direction, toward, lean, gravity

Grammar

Grammar 1 show cause and effect with double comparatives: *The more... the faster...*

Grammar 2 use defining relative clauses with *which*

Pacing Guides L5U4

Mission Think creatively and critically.

Unit Opener

Objectives

- Students will
- analyze a photo.
 - write a caption.

Resources Video: Introduction; Classroom Presentation Tool: Unit Opener; Teacher's Resource CD-ROM: Home-School Connection Letter; Unit Opener Poster

Materials a ball

Related Vocabulary

mountain bike, helmet, goggles

About the Photo

This photo was taken in Chamonix, France. It lies at the base of Mont Blanc, the highest mountain in western Europe. If possible, point out France on a world map.

The person in this photo is riding a mountain bicycle. The sport of mountain biking requires a special bicycle. Mountain bikes have tires that are wide and soft, many gears, strong brakes, and flat handlebars. The rider should wear protective gear such as a strong helmet, leg pads, and gloves.

Teaching Tip

To help students get the most out of an activity, try to move each student one step beyond his comfort zone. For example, some students may want to answer questions with just one sentence. Encourage them to use two sentences instead. Some students might use lots of sentences, but may need encouragement to try new and more complex sentence structures. Help students try one new thing with each lesson or activity.



Chamonix, France

35

Introduce

- **Activate prior knowledge** Say *The name of our next unit is "The Science of Fun."* Ask students what sports and activities they like to do for fun. Write their answers on the board.
- Hold up a ball. Say *Many sports are played with a ball. Imagine you want to make a ball bounce high. Do you throw it soft or hard?* (hard) *Right. You throw it hard to bounce it high.* Throw a ball with some force against the floor. *You throw it soft to bounce it low.* Throw the ball lightly against the floor.
- Say *We just used science to figure out these questions.* Point to the activities listed on the board and say *You use science in the activities you do for fun every day.*
- Say *Open your books to pages 34 and 35 and look at the photo.* Ask questions to encourage discussion of the photo.
 - What's the person in the photo doing?* (riding a bicycle)
 - Where is the person?* (in the mountains)

Do you think it's easy to ride bicycles in the mountains?

(no) *Why not?* (There are a lot of hills and rocks.)

Where is the front wheel of the bicycle? (off the ground)

- Guide students through the activity on p. 34. Assign students to small groups. Have them read items 1 and 2 and discuss how to respond. One student should write the answers that most of the group agrees with. Have groups read their answers.
- Have students complete item 3 individually. Explain that a caption tells about the most important thing happening in a picture or photograph. It is usually only one or two sentences. Say *This caption should tell what the man in the photo is thinking at that very moment. Pretend you're in his place. What do you see? What are you thinking about?* Give students a few minutes to write their captions, then call on several students to read their captions aloud.

Vocabulary 1

Objective

- Students will
- identify and use words about how athletes move

Vocabulary a force, happen, push, pull, a skater, forward, backward, spin, fall over, balance

Resources Workbook pp. 28–29; Audio CD TR: A29–A30; Video: Vocabulary I; Classroom Presentation Tool: Vocabulary I; Teacher’s Resource CD-ROM: Graphic Organizers (Word web), Activity Worksheet 4.1

Related Vocabulary

figure skating, ice rink

1 Listen and read. TR: A29

2 Listen and repeat. TR: A30

We use **force** to move. Force **happens** when we **push** or **pull**. Do you push or pull when you move on a swing? You do both.

Look at this **skater**. To move, skaters push on the ice. A push can move a skater **forward**. It can also move a skater **backward**.

forward

36



Skaters pull, too. Look at these skaters. The more one skater pulls, the more they **spin**. The skaters don't **fall over** because they know how to **balance**.



skaters

backward

3 Work with a partner. What did you learn? Ask and answer.

How do skaters move?

They push on the ice.

37



Be the Expert

About the Photo

The photos on pp. 36–37 show the motions that an ice skater performs to complete a jump. When judges grade a figure skater, part of the grade is for how well the figure skater keeps her balance. The small photo at the top of p. 37 shows a pair of figure skaters performing a move called the death spiral. The pair spins around and around until the woman’s head is almost touching the ice.

Formative Assessment

Can students

- identify and use words about how athletes move?
- Ask questions such as *What do we use force to do? (move) What do you need to have so you don't fall over? (balance)*

Review For additional practice, direct students to Activity Worksheet 4.1.

Warm Up

- **Act it out** Say *Let's imagine we are ice skaters.* Pretend to skate across the floor. Have students copy you. Say *We're moving forward.* Pretend to skate backward. Say *Now I'm skating backward. Try it.* Then say *Sometimes skaters balance on one leg.* Stand on one leg. *Can you do this? Don't fall over!*

Present

- Say *Open your books to pages 36 and 37. Let's learn more words that describe how we move.* Point to each bold word on the pages and have students repeat after you.
- Draw a word web on the board with the word *force* in the center. Say *I push on the desk. When I push, I use force.* Model pushing on a desk. Write *push* in

the word web. Say *I can pull.* Pull a chair towards you. Say *When I pull, I use force.* Add *pull* to the web. Turn in a circle to show *spin* and add *spin* to the word web.

Practice 1 2

- 1 Say *Let's read and listen to information about how ice skaters use force. Read the paragraphs on pages 36 and 37 as you listen.* Play TR: A29.
- Discuss the three paragraphs. Ask questions such as: *What do we use when we push or pull? (force) How do figure skaters move? (They push on the ice.) Why doesn't the skater fall over? (She knows how to balance.)*

- 2 Say *Next we're going to hear words and then listen to sentences with those words. Repeat each word and sentence after you hear it.* Play TR: A30.
- Ask questions about the vocabulary words, such as *How do skaters move forward? (they push on the ice)* ✓ Ask *What happens when you don't balance? (You fall over.)* If students have difficulty, ask *Do you fall over or do you spin?*

Apply 3

- 3 Have students read the Activity 3 directions on p. 37. Then ask two students to model the dialogue aloud. Say *Think of questions you can ask about the words you learned. You can use the words and photos on these pages to help you.* Give a sample question such as *A push can move a skater forward. What else can a push do?*

Wrap Up

- Act out the word *push* by using both hands to push a door closed. Have students guess what word you are acting out. Then ask *What did I just use? (force)* Call on other students to act out more target words. Have the class guess. When a student guesses correctly, she takes a turn acting.

Objective

- Students will
- form double comparatives: *the more... the faster...*

Grammar show cause and effect with double comparatives: *the more... the faster...*

Academic Language *match, describe*

Resources Workbook p. 30, Audio CD TR: A31; Video: Grammar I; Classroom Presentation Tool: Grammar I

Materials ball (optional)

Related Vocabulary *seesaw, skateboarder, merry-go-round*

GRAMMAR TR: A31

The more	she pushes,	the higher	he goes.
The higher	he goes,	the more	he feels sick.
The sicker	he feels,	the worse	he looks!

4 Match the sentences to the pictures.



1. **c** The more she pushes, the higher he goes.
2. _____ The harder he pulls, the faster they spin.
3. _____ The more he goes up, the more she comes down.

5 Look and write. Write a sentence about each person. Use the words in the box.

more	higher	harder	faster	better	kick
push	get	spin	practice	go	



Warm Up

- **Give examples** Say *I want to jump as high as I can*. Do a small jump. Say *If I want to jump higher, I use more force. I push down harder on the ground*. Jump higher off the ground. Say *The more force I use, the higher I jump*. Place a book on your desk. Say *I can push the book*. Push the book very lightly. Say *How can I move the book more? I can use more force*. Push the book harder. Say *The more force I use, the more the book moves*.
- Show students a soft ball. Say *I'll throw the ball to a student near me*. Throw the ball to the closest student. Take the ball and say *Now I'll throw it to a student far from me. What do I do to throw the ball to (Ana)?* (throw it harder, use force) Say *Yes, the more force I use, the farther the ball goes*.

Present

- **Contextualize** Say *Open your books to page 38*. Read aloud the sentences in the Grammar box or play **TR: A31**. Reread the first sentence, emphasizing the words in bold print. Say *This sentence is about the photo labeled c at the top of the page*. Have students look at the photo as you read the first Grammar box sentence again.

- Write the following on the board:

The more _____, the more _____.
The more _____, the better _____.

- Point to the first line on the board. Say *Here's a sentence I can make: The more you study, the more you learn*. Point to the second line. Say *Here's*

Grammar in Depth

A double comparative compares two actions and can be used to show cause and effect. Many double comparative sentences use the following structures:

the (comparative adjective) + (noun),
the more + (noun) + (subject) + (verb)

Example: *The more difficult the problem, the more creativity you need.*

the (comparative adjective) + (noun),
the less + (noun) + (subject) + (verb)

Example: *The easier the problem, the less time you need to solve it.*

In both examples, the first half of the sentence describes a cause (the problem is difficult; the problem is easy). The second half of the sentence describes an effect (you need more creativity; you need less time).

Our World in Context

A seesaw works like a lever. Levers allow people to lift objects or people that they would normally be unable to lift. The farther a person moves from the center of the seesaw, the more the lever helps her lift the person on the other end. To maintain balance on a seesaw, a heavier person should sit closer to the center of the seesaw, and a lighter person should sit closer to the end.

another sentence: The more you practice a new sport, the better you play it. Help students form their own sentences using the words on the board.

Practice 4

- **4** Direct students' attention to the pictures under the Grammar box. Ask *What is happening in the first picture?* (A boy and a girl are on a seesaw.) *What happens when the boy goes down?* (The girl goes up.)
- Ask *What's happening in the second picture?* (A boy and a girl are spinning.) *Are they going fast?* (yes) *What makes them go fast?* (They're pulling each other.) Ask *What's happening in the third picture?* (A girl is pushing a boy on a swing.) *What happens when she pushes the boy?* (He goes higher.)
- Say *Now match the sentences to the pictures. Item 1 is done for you.*
- Point to the second picture. Say *They feel dizzy when they spin.* **✓** *How can you use the word more to finish this sentence? The more they spin, _____.* (The more they spin, the more they feel dizzy.) If students have trouble, write a sentence frame on the board.

Apply 5

- **5** Draw students' attention to Activity 5. Say *Look at the picture of the children playing in the park*. Point to the circular piece of equipment in the middle of the picture. Say *This spins around. The boy is spinning on it*. Ask *What are the other children doing in the picture?* (skateboarding, playing soccer, swinging) Say *You're going to write sentences about each person in the picture*.
- Call on a student to read the words the skateboarder is thinking. Say *Use this sentence to help you write your own. Remember to use some words from the box and write complete sentences*. Have students complete the activity.

Wrap Up

- Write the following on the board:

The more words you learn, _____.

Call on students to complete the sentence. See how many different sentences students can come up with.

Formative Assessment

- Can students
- form double comparatives?
Ask students to complete statements such as *The more difficult the sport...*

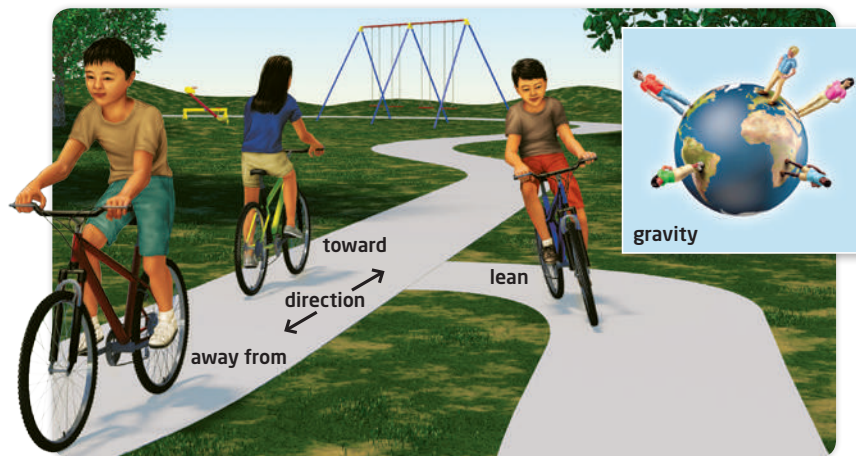
Objective

- Students will
- identify and use words about direction and force.

Vocabulary *away from, direction, toward, lean, gravity*

Resources Workbook p. 31; Audio CD TR: A32–A33; Video: Vocabulary 2; Classroom Presentation Tool: Vocabulary 2; Teacher’s Resource CD-ROM: Graphic Organizers (Flow chart), Activity Worksheet 4.2

6 Listen and repeat. Read and write. Complete the sentences. TR: A32



1. When you throw a ball, _____ pulls it toward the earth.
2. Don't go in that _____. Turn left!
3. He is walking _____ the music because it's too loud.
4. When you ride your bicycle and want to turn left, you turn your wheels to the left, and you _____ to the left.
5. She is riding _____ the swings because she wants to play on them.

7 Listen and stick. Work with a partner. Compare your answers. TR: A33

1

2

3

4

5

39

Warm Up

- **Act it out** Say *Let's think about ways we can move.* List the words *push, pull, forward, backward, spin, balance, and fall over* on the board. Say *When I point to you, act out one of the words. We'll guess the word you're acting out.* Have students act out the words.

Present

- Say *Open your books to page 39.* Say each bold term aloud and have students repeat after you.
- Ask a student to come to the front of the room. Say *(Ai.) walk toward me.* Motion toward yourself. Then, say *Now walk away from me.* Motion away from yourself.

- Say *I told (Ai) which direction to move.* Say *Look at the picture at the top of the page.* Ask *Is the girl going toward the swings or away from the swings?* (toward) *Are the boys going toward the swings or away from the swings?* (away from)
- Point to the boy on the right. Say *The boy leans to help him turn.* Have students repeat the word *lean.* Say *When we lean, we move our bodies a little to the side, like this.* Lean to your right.
- Say *Look at the picture of people on the earth at the top of the page.* Have students repeat the word *gravity.* Say *Gravity is the force that pulls things down toward the ground.* Ask *What is the force that keeps us on the ground?* (gravity)

Teaching Tip

When students are doing a listening activity that requires them to fill in missing information, they may find it helpful to take notes. Tell them to read through the sentences before they listen and focus on the missing words. As students listen, have them try to write key words from the sentences to remember the main ideas.

- Hold up a pencil, and then let go of it so that it hits the floor. ✓ Ask *What force makes the pencil fall?* (gravity) If students have trouble, point again to the picture.

Practice 6

- 6 Say *Now you will hear words and sentences with those words.* Play TR: A32. *Repeat each word and sentence.*
- Work with the class to complete item 1. Ask *Which of the words in the picture makes sense in this sentence?* (gravity) Have students complete items 2–5 individually. Check the answers as a class.

Apply 7

- 7 Put students in pairs. Say *Let's do a sticker activity. The stickers have the new words on them. You are going to listen to a story. Every time you hear a beep in a sentence, choose a sticker with the word that belongs in the sentence.*
- Say *The first time you hear the story, just listen. Don't use the stickers.* Play TR: A33. Say *Now you'll hear the sentences again. This time place your stickers on the page.* Stop the audio at the end of each sentence that has a beep so students can work with the stickers.

Wrap Up

- Write the following clues on the board:
 - This force pulls things toward the ground.* (gravity)
 - You do this when you stand with your body a little to the side.* (lean)
 - You move in this direction to go closer to something.* (toward)
- Have students figure out the answers to the clues. Then call on students to write the answers on the board.

Formative Assessment

- Can students
- identify and use words about direction and force?
- Ask questions such as *When you throw a ball, does it go toward you or away from you? When you let go of a ball, what force pulls it toward the ground?*

Review For additional practice, direct students to Activity Worksheet 4.2.

Objective

- Students will
 - write and say definitions that include *which*.

Grammar use defining relative clauses with *which*

Academic Language definitions, instructions

Content Vocabulary friction

Resources Workbook p. 32; Audio CD TR: A34; Video: Grammar 2; Classroom Presentation Tool: Grammar 2; Teacher's Resource CD-ROM: Activity Worksheet 4.3

Materials dictionaries or electronic dictionaries; scissors; coins

GRAMMAR TR: A34

The force **which** pulls you toward the center of the earth is called gravity. Skates are special shoes **which** you wear when you go ice skating.

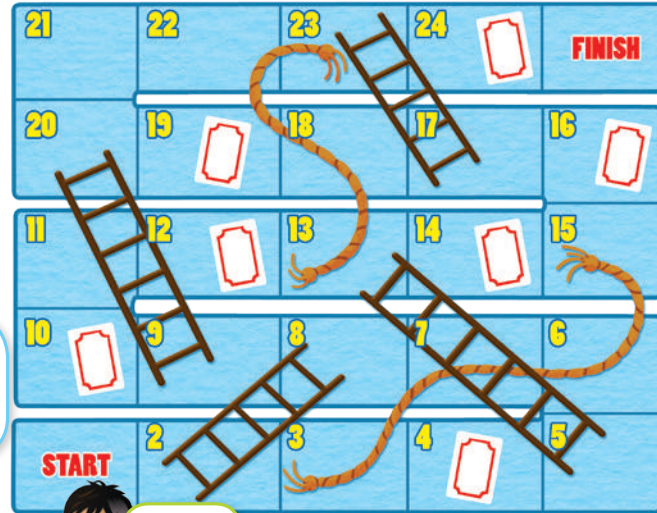
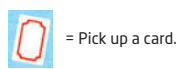
- 8 **Complete the definition for each item.** Work with a partner. Write in your notebook. Then read your definitions and guess. Take turns.

Example: Bicycle: A machine with wheels which you can ride in the park

Skateboarding: A hobby _____ Friction: A force _____

Bingo: A game _____ Soccer: A sport _____

- 9 **Play a game.** Play with a partner. Cut out the cards on page 103. Take turns.



A bicycle is a machine with wheels and handlebars which you ride.



Warm Up

- **Recycle** Write the following vocabulary words on the board:

happen	force
skater	spin

Say *When we give a definition for a word, we say what the word means. For each word on the board, say a sentence that tells what the word means. I'll do the first word, happen. Write on the board: happen: To happen means to take place. Say For example, learning happens in class.* In small groups, have students write definitions for the remaining words. (Sample definitions: force: Force is what makes things move. skater: A skater is a person who skates. spin: To spin is to turn in a circle.)

Present

- **Explain** Say *We often use the word which to ask a question, such as "Which sport is your favorite?" In this lesson we're going to use the word which in a different way. We're going to use it in definitions.* Ask students to open their books to p. 40 and to study the Grammar box. Play **TR: A34**.
- Say *We can use the word which in a definition to explain or describe something.* Point to the first sentence. Say *Which comes after the word force. This tells us that we'll see more information about the word force. We learn what kind of force gravity is.*
- Point to the second sentence. Say *In the second sentence, the word which comes after the word shoes. It helps explain what kind of shoes skates are.*

Grammar In Depth

When the word *which* is used in a definition, it often follows a noun that helps identify the word being defined. For example: *Baseball is a sport which is played using a ball, glove, and bat.* The word *which* follows *sport*, which helps identify the word *baseball*.

The word *which* is also commonly used in a nondefining relative clause. This type of clause is used to give extra information that is not necessary to the sentence. The sentence can make sense without it.

Nondefining relative clauses are set off with commas. For example: *That pizza, which I don't like, has peppers.* The clause, *which I don't like*, is not necessary to describe the pizza.

- Write the sentence frame *This is a sport _____*, on the board. Have students use the sentence frame to give you a definition of a sport.

Practice 8

- 8 Say *Now, look at Activity 8. You'll be writing definitions with the word which.*
- Read the Example aloud. Say *The definition uses the word which to tell what kind of machine a bicycle is.* Using a dictionary, have students write their own definitions with *which*.

Apply 9

- 9 Say *Now we'll play the game on page 40.* Pass out scissors. Have students cut out the game cards on p. 103 of their books. Assign pairs to play the game.
- Display a coin and point out the "heads" side and the "tails" side. Then say *You'll flip a coin each time it's your turn to move. If the coin lands heads side up, move one space. If it lands tails side up, move two spaces. When you land at the bottom of a ladder, move to the top of the ladder. When you land at the top of the rope, move to the bottom of the rope. When you land at the top of a ladder or the bottom of a rope, don't do anything.*
- Say *When you land on a space with a white rectangle, pick up a card. The card will tell you to ask your partner a question or act out a word. Do not show your partner the card. If your partner gives the correct answer, you both move two spaces ahead. The player to reach Finish first wins.*

Wrap Up

- Write the following on the board:

Lettuce is a vegetable which _____.
Video games are games which _____.
Horses are animals which _____.

Have students choose a sentence frame and complete a definition that includes the word *which*. Call on students to share their definitions with the class. Ask for multiple definitions for each word.

Formative Assessment

- Can students
 - write and say definitions that include *which*?
 - Ask students to use the word *which* in definitions for *skater* and *balance*.

Review For additional practice, direct students to Activity Worksheet 4.3.

Song - The Sounds of English

Song

Vocabulary

Vocabulary 1 *push, pull, spin, force*

Vocabulary 2 *gravity*

Grammar

Grammar 1 show cause and effect with double comparatives: *the more... the faster...*

Resources Workbook p. 33; Audio CD TR: A35; Video: Song; Classroom Presentation Tool: Song; Teacher's Resource CD-ROM: Activity Worksheet 4.4

The Sounds of English

Resources Workbook p. 33; Audio CD TR: A36; Classroom Presentation Tool: The Sounds of English; Picture Cards 30, 45, 117, 133, 422, 459; The Sounds of English Card 32

10 Listen, read, and sing. TR: A35

I'm on the Move!

Push it! Pull it! Push it! Pull it! Push! Pull!
Push! Pull! Push! Pull! Watch it go!

If you spin around, and around and
around and around,
what you feel is force.

If you fall down, down, down, down,
down to the ground,
that's gravity, of course.

I'm on the move.

I'm in the groove.

It's amazing what you can do
when you let force do the work for you!

THE SOUNDS OF ENGLISH TR: A36

push

11 Listen to the underlined sounds.

Say the words.

- | | | |
|-----------------|---------------|--------------|
| 1. <u>push</u> | <u>pull</u> | <u>put</u> |
| 2. <u>took</u> | <u>cook</u> | <u>foot</u> |
| 3. <u>could</u> | <u>should</u> | <u>would</u> |

41

Use the Song 10

- **Act it out** Say *We've talked about ways that people move when they are doing a sport. When people move, they use force. Sometimes they spin.* Turn around slowly to demonstrate *spin*. *Sometimes they need to balance.* Balance on one leg. Say *When they lose their balance, they fall over.* Pretend to lose your balance.
- Say *When you jump, you push your feet against the ground. The more you push down against the ground, the higher you jump.* Bend your knees to push down on the ground and jump.
- List the words *push, pull, spin,* and *force* on the board and have students copy the words.
- **10** Play the first three verses of the song (TR: A35) once so students can hear words about force and movement. Play the same part of the song a second time. Tell students to read along silently with the song and make a check mark next to each vocabulary word they hear.
- Say *Now let's act out the actions in the song!* Call two students to the front of the room. Have them model making a pushing motion with their arms. Then have them make a pulling motion. Have the class practice making the motions with them. Then have them try spinning slowly around and dropping to the floor.

- Say *Now do it along with the song.* Play the first eight lines of TR: A35 and have the class perform the actions (pushing, pulling, spinning, and falling) in time with the words of the song. Then have them do it again while they sing the words.

Extend

- Play the song all the way through as students follow along in their books. Complete song lyrics are on p. 94. Draw students' attention to the line in the song that reads *The more you push, the faster some things go.* Have them write new lines for the song using the same structure: *the more... the (faster..., more ...).* If they have difficulty, provide this example: *The more you spin, the dizzier you get.* Call on students to share their sentences and write them on the board. Sing the song again, substituting the new lines.

The Sounds of English: /ʊ/ as in push 11

- **11** Use the classroom door or pantomime the action of pulling a door open and pushing it closed a few times. Then pull the door open and ask *What word describes this action?* Say *That's right. It's pull.* Push the door closed and ask *What word describes this action?* Say *Yes. It's push.* Write *pull* and *push* on the board, say the words, and have the class repeat. Underline the *u* in each word and say *Both words have the /ʊ/ sound.*
- Say *Now let's listen for other words that have the same /ʊ/ sound you hear in push and pull.* Play TR: A36 once while students listen. Tell students to point to the underlined letter or letters as they listen to each word. Then say *Let's listen and say.* Play TR: A36 again and have students repeat the words.
- Make three columns on the board with the headings *u, oo,* and *ou.* Make sure students understand that each combination of letters can make the /ʊ/ sound. Say *Help me fill in the columns with the words from Activity II.* Randomly point to a column and call on students to say a word from Activity II that belongs in the column. Repeat until all the words are written in the proper columns.
- To check understanding, have students look at pictures, listen, and raise their hands when they hear /ʊ/ as in *push.* Display Picture Cards or other pictures that contain the target sound (*book, bush, foot, cookie, look, put away*), and some that don't. If students raise their hands in error, repeat the incorrect word and a word with the target sound to demonstrate the contrast.

Be the Expert

Teaching Tip

Use a song to check students' ability to identify familiar words in unfamiliar sentences. The first time you play a song, have students listen with their books closed. See how many words students know and can list from the song. You might want to play the first few lines and then repeat. See if students can identify more words each time.

The Sounds of English Cards

You can use The Sounds of English Card 32 to teach the /ʊ/ sound. The card and corresponding audio are available on the *Explore Our World* website.

Objectives

- Students will
- understand the effects of force on roller coasters and bicycles.
 - describe a roller coaster ride.

Reading Strategy Understand Cause and Effect

Academic Language describe

Content Vocabulary safety bar, steep, centripetal force, friction

Resources Workbook pp. 34–35; Audio CD TR: A37; Classroom Presentation Tool: Reading; Teacher’s Resource CD-ROM: Graphic Organizers (Two-column chart)

Materials drawing paper; markers

Related Vocabulary

motion, theme park

12 Listen and read. TR: A37

Up, Down, and All Around!

You are going on a roller coaster ride. Sit in the car and pull down the safety bar. Are you ready? Let’s go!

First, you go up a steep hill. The roller coaster goes slow. Suddenly, when you reach the top, the roller coaster goes down the hill very quickly. Gravity pulls you down. Whoooosh! You feel very light!

Next you reach a big circle, called the “loop-the-loop.” This part is many people’s favorite. First, you go up the circle, and you feel heavy. Gravity is pulling you down. Then you reach the top. You’re high in the sky and you’re hanging upside down! So why don’t you fall out of your seat? Your body wants to fly off, but the speed of the car and a force called centripetal force keep you moving in a circle, and keep you in your seat!

The roller coaster uses friction to stop. If it stops quickly, your body wants to continue moving. But the safety bar keeps you in place! Roller coasters are the best!

13 Look and discuss. Work with a partner. Describe a ride on a roller coaster.



The Russians invented the roller coaster. They made the “cars” from ice. And they put fur on the seats to keep the passengers warm.



42

Warm Up

- Say *We’ve talked about force. We can use force to push.* Push your desk so that it moves a bit. Ask *What other kinds of force do you know?* (pull, spin, gravity) Write students’ answers on the board. Then do an action to show each one. For example, you can drop a pencil to demonstrate gravity. Have students guess each force as you show it.

Present 12

- Say *Open your books to page 42 and look at the photo of the roller coaster.* Point out the people in the roller coaster cars. Say *Look. Some of the people are upside down!* Ask *Has anyone ever been on a roller coaster ride?* Have students who have been on one tell what it was like.

- **Read together 12** Play TR: A37 and have students read along. Ask *What vocabulary words did you notice in the Reading* (pull, gravity, force) Play TR: A37 a second time. Pause at the end of each paragraph to ask questions:

Paragraph 1: *What do you pull down when you get into a roller coaster car?*

Paragraph 2: *What force pulls a roller coaster down a hill?*

Paragraph 3: *What force keeps people in their seats when the roller coaster is upside down?*

Paragraph 4: *What force stops the roller coaster?*

- Check students’ comprehension by describing a roller coaster’s movement and having them draw a picture of it. Say *Draw a line on your paper to show how the roller coaster moves.* Read aloud the

following sentences, pausing after each: *First, you go up a steep hill. Draw a line that shows that movement.* Model on the board by drawing a line that goes up. Say *Next, gravity pulls you down the hill. Continue the line to show that. A big circle, known as the “loop-the-loop,” is many people’s favorite. Continue the line in a circle to show a “loop-the-loop.” The roller coaster uses friction to stop.* Check that students’ drawings show an understanding of how a roller coaster moves.

Practice

- Write *gravity, centripetal force,* and *friction* on the board. Have partners talk about what the forces do in a roller coaster. ✓ Ask *Which force makes a roller coaster stop?* (friction)
- Say *Now think about the forces you feel when you ride a bike.* Ask *When do you feel gravity?* (going down a hill) Say *Yes. Going down a hill or when you jump a bike over a bump and come down to the ground again. What about centripetal force? Think about why you don’t fall when you lean over to turn.*
- Draw a two-column chart on the board next to the words *gravity, centripetal force,* and *friction.* Label the left column **Roller Coaster** and the right column **Bike.** Say *Let’s fill in the boxes about gravity together.* Ask *When do you feel gravity on a roller coaster?* (when it pulls you down a hill) *When do you feel gravity on a bike?* (when you ride down a hill) Say *Fill in the chart with your partner. Ask these questions to help:*

When do you feel this force?
What does the force do?

- When students finish, review responses together.

Apply 13

- **13** Read the directions to Activity 13 out loud. Say *Let’s think about roller coasters we know.* Have two students read aloud the model dialogue at the bottom of p. 42. Say *Tell your partner about your favorite roller coaster. You can talk about a roller coaster you know or the one shown on page 42.* Assign partners. Say *Describe the roller coaster. Use some of the new words you learned. Then ask each other questions about the roller coaster ride.*

Wrap Up

- Hand out drawing paper. Say *Draw a picture of your own roller coaster! Show where it goes up and where it goes down. Draw any loop-the-loops.* When students finish, have them label where the forces of gravity, friction, and centripetal force belong.

About the Photo

The photo shows the Wipeout roller coaster at the Pleasurewood Hills theme park on the eastern coast of England. This roller coaster reaches speeds of nearly 80 km per hour (50 mph). It is 36 m (117 ft) high at the top of its loop-the-loop.

Reading Strategy

Understand Cause and Effect As students read, they should learn to look for causes and effects in text. Identifying what happens (effects) and why the events happen (causes) will help them understand the relationship between the events in a text.

Sometimes, an effect will have more than one cause. Or, a cause will lead to more than one effect. Have students look for words such as *because, why,* and *as a result* to help identify cause and effect.

Formative Assessment

- Can students
- understand the effects of forces on roller coasters?
Ask questions such as *When is there centripetal force on a roller coaster ride? When is there friction on a roller coaster ride?*
 - describe a roller coaster ride?
Have students use the words *gravity, centripetal force,* and *friction* in their descriptions.

Mission

Mission Think creatively and critically.

Objective

- Students will
- share ideas.

Resources Video: Meet the Explorer; Classroom Presentation Tool: Mission; Mission Poster

Be the Expert

Meet the Explorer

Stephon Alexander moved to New York City from the Caribbean nation of Trinidad when he was only eight. “My childhood was full of surprises,” he said. “It taught me the idea of embracing the unknown.”

Today, Alexander teaches physics at Pennsylvania State University in the United States. He uses mathematics and science to try to answer questions about the universe. He studies the effect of gravity on our world and the things in it.

Alexander finds that playing jazz on his saxophone in his spare time helps him with his studies. He also has found that he is able to get students more interested in physics if he makes his music part of his science lessons.

Teaching Tip

When students share their work in groups or with the class, it can be helpful to use an “author’s chair.” Choose a seat or chair and show that it’s the author’s chair by marking it with colored paper or a sticker. Have each student sit in this special seat when they are presenting their work. This can be helpful in getting other students to focus on the speaker and makes the presentation seem a little more formal. Make sure all students have a chance to sit in the “author’s chair” and present.

Think creatively and critically.

Why is it important to understand how and why things work?

Spiral galaxy, photograph from Hubble Space Telescope

NATIONAL GEOGRAPHIC

Stephon Alexander
Theoretical Physicist
Emerging Explorer

“When something unexpected or unusual happens, I am always curious to find out why.”

43

Mission

- Read the sentence at the top of p. 43. Tell students that thinking creatively means coming up with new ideas, and thinking critically means thinking about whether ideas work.
- Ask questions about critical thinking:
 - What do you want to understand better?*
 - How can you learn how something works?*
 - How can discussing your ideas help you?*
- Point out the term *physicist*. Say *Physics is the science of energy and how things work. Stephon Alexander is a scientist who thinks about physics.*
- Read the quotation at the bottom of the page. Ask students if they have experienced anything unexpected recently, and challenge them to explain why those things took place.

Give the Unit Quiz

- Hand out the Unit 4 Quiz. Say *Look at the directions, examples, questions, and pictures. Think about what you’ve learned.*
- **Listening instructions, Section I** Point to the pictures on p. 67. Say *Look at the picture.* Point to the letters. *The letters point to different details in the picture. Write the letter that matches the sentence you hear. Now listen to an example.* Play **TR: AB34**. (She fell over.) After students write a letter, ask *What letter did you write?* When students respond with the letter G, begin the quiz. Play the rest of **TR: AB34**.
- When students finish Section I, read the directions for Section 2 aloud. Ask *What do you have to do?* (Complete the sentences. Use the words in parentheses.) Repeat the process for Sections 3 and 4. (3: Complete the sentences. Use *more* or *which*. 4: Read. Circle *True* or *False*.) Have students complete Sections 2–4.
- **Listening instructions, Section 5** Read the directions aloud. Then say *Now listen to an example.* Play **TR: AB35**. (We use force to move.) After students complete the sentence, say *What sentence did you write?* Begin the quiz after students respond with *We use force to move*. Play the rest of **TR: AB35**.
- **Speaking instructions** Point to the image at the bottom of p. 85. Say *Look at the image. Answer my questions. Use complete sentences. Now listen to an example.* Point to the skater. Ask *What does she do?* Say *She’s a skater*. See p. 91 of the Assessment Book for questions and expected student responses.

Give the Mastery Test

- **Listening instructions, Section I** Use the *Listening instructions, Section I* in the Give the Unit Quiz section above, but play **TR: AB44** for this example on p. 77. (She has a problem.) After students write a letter, ask *What letter did you write?* (F) Play the rest of **TR: AB44**.
- Confirm understanding of the directions for Sections 2–4. (2: Complete the sentences. Use words from the box. 3: Read. Rewrite the sentences. 4: Read. Circle *True* or *False*.)
- **Listening instructions, Section 5** Use the *Listening instructions, Section 5* in the Give the Unit Quiz section, but play **TR: AB45**. Example answer: *Pollution is a big problem.*
- **Speaking instructions** Use the image at the top of p. 88 and the following example. Ask *What’s this?* Point to the computer screen. Say *It’s a computer screen*. See p. 92 of the Assessment Book for questions and expected student responses.

Assessment

Resources Assessment Book pp. 67–68, 77–78, 85, 88, 91–92, 94–95, 97–98; Assessment Audio CD TR: AB34, AB35, AB44, AB45

Be the Expert

Testing Tip

Manage time. Teach students to pace themselves based on how long the test should take to complete. Even though time is an important factor, remind students not to rush, and to do their best. Also, remind them to keep focused on the test and not to get distracted with one or two difficult questions.

Assess Unit Objectives

Ask questions such as the following:

- *What is gravity?*
- *Which of these actions use force: pull, push, spin, balance?*
- *What are skates?*

Project For a theme-related closing activity, direct students to the Unit 4 Project Worksheet.

Vocabulary 1 a skater, spin, balance, happen, fall over, forward, backward, force, pull, push

Vocabulary 2 direction, toward, away from, gravity, lean

Grammar 1 show cause and effect with double comparatives: *The more... the faster...*

Grammar 2 use defining relative clauses with *which*

Song *I'm on the Move!*

Viewing Roller coasters, race cars, pedal boats, roller skating

Meet the Explorer Stephon Alexander

Story Time *The Tug-of-War*

Resources Student Book, pp. 34–40, 43; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart)



Zoom In

Vocabulary

- After viewing, have students use three words to tell about force and movement in a new activity.

Grammar

- While viewing Grammar 1, stop the video after each comparison. Have students complete this sentence frame to tell about what happens: *The more _____, the more _____.*

Song

- Play the video with the audio off. Ask students to write down the vocabulary words that the singer acts out. (*push, pull, spin, down*)

Viewing

- Play the viewing segment once, pausing at the end of each activity mentioned. Ask *What kinds of force does a (roller coaster) use? How do the people in the video move?*

Meet the Explorer

- Say *Stephon Alexander talks about a very small particle that fills the whole universe.* Ask *What does Stephon Alexander compare the Higgs field to?* (the ocean)

Story Time

- View *The Tug-of-War* once with students.
- View it again. Pause the video occasionally and ask questions such as *What causes the animals to argue?* (Some animals think Elephant is strongest, and others think Hippo is strongest.) *What causes Elephant and Hippo to think Turtle is so strong?* (They do not see who is at the other end of the rope. They think it is Turtle.)

The Tug-of-War

One morning, the animals in the jungle have an argument. Some say Elephant is the strongest animal in the jungle. Others say Hippo is the strongest. When Turtle says that he is the strongest, the other animals laugh at him. Can Turtle prove that he is right?



Before You Read

- **Activate Prior Knowledge** Ask students the following questions. *Have you ever played a game called tug-of-war? How is the game played? How does a person or a team win the game? How do players move in a game of tug-of-war?* Act it out if necessary.
- **Introduce the Strategy** Review the meaning of *prediction*. Say *When you make a prediction, you make a guess about what is going to happen. You look for clues that help you make a good guess. For example, look at the picture on the cover of this reader. Ask What do you think this story will be about? Your guess is a prediction.*
- Have students use a two-column chart to keep track of predictions. Have students write **What I predict** at the top of the first column and **Was I correct?** at the top of the second.
- Say *As we read, we will sometimes stop to make predictions about what will happen next. Look for clues in the text to help you make these predictions.*

While You Read

- Stop after every few pages to make predictions together about what will happen next. Ask these questions and allow time for students to write their predictions in their charts.
 - p. 5: *How will Turtle prove he is stronger?*
 - p. 7: *Who will win, Elephant or Hippo? Why?*
 - p. 10: *Will the animals find out about Turtle's trick? Why or why not?*

After You Read

- After finishing the story, ask students to fill in the second column with “yes” and “no” answers. For “no” answers, have students write what actually happened.

Text Type folktale

Reading Strategy Make Predictions

Vocabulary push, pull, forward, backward, a force, fall over, balance, happen

Grammar show cause and effect with double comparatives: *The more... the faster...;* use defining relative clauses with *which*

Resources Video: Story Time; Classroom Presentation Tool: Story Time; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart)

Be the Expert

Reading Strategy

Make Predictions Making a prediction means making a guess about what will happen in a story. Tell students to look for clues in as many places as they can when making predictions. They should use what they knew before reading the story, what they have already read in the story, and what they see in the pictures.

When predicting what will happen next, students need to think about the characters' personalities. Making predictions encourages students to be active readers and engage with the text they are reading.

Text Background

This story is a type of folktale known as a trickster tale. In trickster tales, one person or animal is tricked by a smaller, smarter person or animal. In this African folktale, the large animals are often not very smart and may not even realize they have been tricked. Ask students to identify the trickster in the story (Turtle) and who is tricked (Hippo and Elephant).

Student Book

TR: A29 Unit 4. 1 Listen and read.

We use force to move. Force happens when we push or pull. Do you push or pull when you move on a swing? You do both.

Look at this skater. To move, skaters push on the ice. A push can move a skater forward. It can also move a skater backward.

Skaters pull, too. Look at these skaters. The more one skater pulls, the more they spin. The skaters don't fall over because they know how to balance.

TR: A30 2 Listen and repeat.

- a force A force can push or pull.
- happen What happens when skaters stop?
- push To close the door, push it.
- pull To open the door, pull it.
- a skater Look at those skaters. They're wonderful!
- forward The car moves forward.
- backward Skaters can move backward and forward on the ice.
- spin Can you stand on one leg and spin in a circle?
- fall over I often fall over and get bruises.
- balance I can't balance very well when I skate.

TR: A31 Grammar

The more she pushes, the higher he goes.
The higher he goes, the more he feels sick.
The sicker he feels, the worse he looks!

TR: A32 6 Listen and repeat. Read and write. Complete the sentences.

- away from The boy is riding away from the swings.
- direction The boy and the girl are riding in different directions.
- toward The girl is riding toward the swings.
- lean Don't lean on the table. It might break!
- gravity Gravity pulls you toward the center of the earth.

TR: A33 7 Listen and stick. Work with a partner. Compare your answers.

Pedro loves riding his bicycle. But his friends want to

go to the swings. He decides to leave his friends and ride his bike. He gets on his bicycle and rides _____ the playground. He knows there is a bike trail near the lake. When he gets there, he needs to decide: Right or left? What _____ does he want to go? He goes right. The trail is not straight. It goes up and down, left and right. When he gets to the top, he starts going fast down the hill. He has to _____ left to turn to the left and that's when he sees a big tree is in the middle of the trail and he is riding _____ the tree. Oh, no!! He has to think quickly. He doesn't want to brake and just fly over the bicycle. Then he sees lots of dry leaves on the side of the trail. What does Pedro do? He brakes just a little and he lets _____ pull him to the bed of leaves. It's good he always wears a helmet!!

TR: A34 Grammar

The force **which** pulls you toward the center of the earth is called gravity.
Skates are special shoes **which** you wear when you go ice skating.

TR: A35 10 Listen, read, and sing.

Note: Lyrics for the song *I'm on the Move!* are on Student Book p. 94.

TR: A36 11 The Sounds of English /ɪ/ **push** Listen to the underlined sounds. Say the words.

- 1. push pull put
- 2. took cook foot
- 3. could should would

TR: A37 12 Listen and read.

Note: Text for the Reading *Up, Down, and All Around!* is on Student Book p. 42.

Workbook

TR: 19 Unit 4. 8 Listen and look. Check T for True and F for False.

Girl: Mrs. Li, can you please explain something?
Woman: Sure. How can I help you, Ming?
G: I still don't understand gravity...
W: OK, when you fall over, what happens? You fall down on the ground. That's the force of gravity pulling you.
G: So gravity pulls everything down, right?

W: Gravity doesn't pull things down. Gravity doesn't pull the sun down to the earth, for example! So, what does gravity do?

G: Does it pull things toward the earth?

W: Yes, that's right, Ming! So if you fall over, gravity pulls you toward the center of the earth.

G: I see. We only think it pulls us down, because we are on the earth.

W: Right! And gravity pulls the sun toward the center of the earth, but not down to the earth!

G: Wow. That is so cool...

TR: 20 9 Listen again. Complete the dialogue.

TR: 21 10 Listen and write. Write the clues you hear in the quiz. Then listen again and write the correct answers.

Boy: It's my turn. Ready, everyone?

Girl 1 and Girl 2: Yes!

B: OK. It's a useful subject which we study in school.

GI: Is it science?

B: No. Try again.

G2: It's English!

B: Yes. Two points for you, Angela. It's your turn now.

G2: OK, it's something which you drink when you have a cough.

GI: Medicine!

G2: That's right. Two points for you, Claudia. It's your turn.

GI: It's a vegetable which we grow in our garden.

B: Lettuce!

GI: Yes! We have two points each!

TR: 22 12 Listen and write the rhyming pairs in the song.

Note: Lyrics for the song *I'm on the Move* are on Student Book p. 94.

TR: 23 13 Listen. Write the missing letters that sound like the **u** in **put**. Then organize the words according to spelling.

1. put 2. foot 3. pull 4. would 5. book 6. bush 7. cookie 8. octopus

TR: 24 14 Listen and read.

Note: Text for the Reading *The Science of Skateboarding* is on Workbook p. 34.

Answer Key

Student Book

Unit Opener SB p. 34

1. Possible answers: mountains, snow, backpack, mountain bike, sky, wheels, helmet, shoes, grass, rocks, gloves, jacket, etc. 2. He's riding his mountain bike. 3. Captions will vary.

4 SB p. 38

1. c 2. b 3. a

5 SB p. 38

Possible answers:

- 1. The harder I push, the faster I go.
- 2. The harder I kick, the higher it goes.
- 3. The more I push, the faster I spin.
- 4. The more I practice, the higher I go.

6 SB p. 39

1. gravity 2. direction 3. away from 4. lean 5. toward

7 SB p. 39

1. away from 2. direction 3. lean 4. toward 5. gravity

8 SB p. 40

Possible answers:

- Skateboarding: A hobby which many kids enjoy
- Friction: A force which helps stop a roller coaster
- Bingo: A game which we play in class
- Soccer: A sport which you play with a ball

Workbook

Go to pp. 211–212 for the Workbook Answer Key for this unit.

Vocabulary Units 1-4

Grammar Units 1-4

Resources Workbook pp. 36-39;
Audio CD TR: A38-A39

Materials eraser

1 Listen. Circle the inventions that you hear. TR: A38

airplane plastic eraser wheel

2 Listen again. Answer the questions. TR: A39

1. What was Charles Goodyear's idea? _____
2. What is Anya's score at the end of the competition? _____
3. What will Anya do next month? _____

3 Work with a partner. Take turns. Ask and answer questions about life at school. Use the words in the boxes.

go to school	clean	leave garbage
do chores	watch TV	wear a uniform
raise your hand	talk	use cell phones

must must not have to can can't

What time do you have to go to school?

I have to go to school at 7 a.m.

4 Write. Make sentences about life before these inventions, using *used to*.

computers TV the internet airplanes erasers

Before computers, people used to spend more time together.

5 Read and write.

a dinosaur	a solution	a hobby	an inventor
a skater	plastic	together	toward

1. This is a person who moves, turns, and spins on ice. _____
2. Collecting fossils is an example of this. _____
3. This is a person who invents things. _____
4. This is a creature which lived millions of years ago. _____
5. It's the opposite of *alone*. _____
6. It's the opposite of *away from*. _____
7. It's the opposite of a problem. _____
8. Bags made from this are not biodegradable. _____

6 Work with a partner. Choose list A, B, or C. Write definitions in your notebook.

A an avatar
an octopus
a comic book
a creative person
(to) pull

B a bug
a shark
a good friend
a problem
a wheel

C biodegradable
gravity
a screen
a stuffed animal
(to) take photos

It's the opposite of push.

It's the force that pulls you toward the earth.

7 Work in a group. Take turns. Read your definitions to the group. Can they guess?

8 Work in a group. Make predictions about the world 40 years from now, using *will* and *won't*.
We won't go to movie theaters anymore.

Teaching Tip

Reading Students will often have to read a text more than once to fully understand it. When doing a reading activity, make sure there is time for students to read the text silently and identify words or phrases they don't know. To help students with reading comprehension, review a text before students read it. Pre-teach any vocabulary or phrases you think may be unfamiliar to students, and answer any questions that they might have on the language used in the text.

Listen 1 2

- 1 On the board, draw an airplane and a wheel. Draw two or three small items made of plastic, such as a food storage container, a travel mug with lid, or a sandwich bag. Label them "plastic." Then holding up an eraser and gesturing toward the board, say *Remember, these are all inventions.*
- Have students open their books to p. 44. Say *Let's listen to a competition about inventions.* Direct students' attention to Activity 1. Say *Circle each invention you hear. You will not hear one of the inventions.* Play TR: A38. Ask *Which invention was not talked about?* (plastic)
- 2 Read items 1-3 aloud with students. Say *Let's listen to the competition again. Listen for the answers to the questions.* Play TR: A39. Pause

the audio as necessary to give students time to write their responses.

Speak 3

- 3 Read the directions and the words in the boxes. Form pairs and call on one to model the sample dialogue. Then ask *What is something we must not do in school?* (We must not leave garbage in the hallway. We must not use cell phones in school.) Have students do the activity.

Write 4

- 4 Ask *How did people use to travel before airplanes?* Record students' responses. Then have a student read the directions and the sample sentence at the bottom of p. 44. Have students write. If they have difficulty coming up with

sentences, ask questions about the other inventions in the box.

Read 5

- 5 Have students scan items 1-8 and underline any words they don't know. Review these words with the class. Read the words in the box. Then say *Write the word from the box that goes with each sentence.* Give students time to complete the activity. Review answers with the class.

Write 6

- 6 Pair students and have each pair choose a list of words that they would like to define (A, B, or C). Say *Work with your partner. Write a definition for each word or phrase.* Explain to students that they can tell what each word or phrase means, give an

example, or give its opposite. Have students use the sample sentences in Activity 5 as a model.

- To give extra support, circle the words *a problem* (List B) and *biodegradable* (List C). Say *Use the opposite of these words in your definition.* Write the sentence frame *This is the opposite of _____.* Remind students to use vocabulary words from the unit in their definitions whenever possible.

Speak 7 8

- 7 Form groups of three. Include one student who chose each list (A, B, and C) in each group. Say *Pick a word and read the definition you wrote to the group. Don't say what the word is. Your group will guess.*
- 8 Have students refer back to their sentences for Activity 4 about how inventions can change life to help them imagine changes in the future.

Objectives

Everyday English: *Wow, that's cool!*

- Students will
 - ask questions.
 - show they're interested.
 - keep the conversation going.

School English: *What does that mean?*

- Students will
 - interrupt someone (formally and informally).
 - ask the meaning and ask how to spell or say something.
 - explain a meaning and give a spelling.
 - say that they don't know.

Content Vocabulary *professional, World Cup*

Academic Language *interrupt, formal, informal, meaning, pronunciation, spelling*

Resources Audio CD TR: A40–A42

Wow, that's cool!

- I will ...
- ask questions.
 - show I'm interested.
 - keep the conversation going.

1 Listen and read. TR: A40

Pablo: What's your favorite sport?
 Mario: Soccer. I want to be a professional soccer player.
 Pablo: **Do you?**
 Mario: Yeah! **What about you?**
 Pablo: What's your favorite sport?
 Pablo: I love soccer, too. My dad is taking me to the World Cup!
 Mario: Wow. **That's so cool!**



Do you? (Can you? / Are you?)
 Really?
 Wow.

What about you?
 How about you?
 And you?

That's so cool!
 That's amazing.
 How cool!

2 Work with a partner. Use the chart. Talk about your favorite hobby or person.

Wow, that's cool! 1 2

- Ask a student *What do you want to be when you're older?* Guide the student to name a job. Say *Do you? That's so cool!* Repeat with several other students. Direct students to the first column of the chart on p. 46. Then say *When our friends tell us something about themselves, we can use these sentences to show we're interested.* Point to the second column in the chart. Tell students they can also ask their friends these questions to find out what they're interested in.
- Point to the third column and say *Here are more sentences you can use to respond.* Model an example. Say *I like basketball.* Walk around the class and ask students *How about you? What sport*

do you like? When students answer, reply with a phrase such as *Really? How cool!* Call on several students to respond.

- 1 Say *Pablo and Mario are talking about their favorite sports. Let's listen.* Play TR: A40 as students read along in their books. After the audio, ask *What's their favorite sport?* (soccer) *What does Mario say about Pablo going to the World Cup?* (Wow. That's so cool!) *What's another response he could give?* (How cool! Really? That's amazing.)
- 2 Pair students. Say *Tell your partner about your favorite hobby or person.* Have partners use words from the chart to respond to the sentences. When they finish, have them switch roles.

What does that mean?

- I will ...
- interrupt someone (formally and informally).
 - ask the meaning and ask how to spell or say something.
 - explain a meaning and give a spelling.
 - say that I don't know.

3 Listen and read. TR: A41

Antoni: **Hey,** Martina, **what does this mean?**
 Martina: **I don't know. I think it's a kind of** weather.
 Antoni: Um, I don't think so.
 Martina: Why don't you ask the teacher?
 Antoni: **That's a good idea. Excuse me,** Ms. Biga.
 What does this word mean?

Hey, Excuse me, Mr. / Ms. / Mrs. _____	What does _____ mean?	I think it's a kind of _____. I think it means _____. It's the opposite of _____.	I don't know. I'm not sure.	That's a good idea. Good point.
	How do you spell _____? How do you pronounce this word? How do you say _____?			

4 Listen. You will hear two discussions. Read each question and circle the answer. TR: A42

- What does the boy want to know?
 a. meaning b. spelling c. pronunciation
- What does the girl want to know?
 a. meaning b. spelling c. pronunciation

5 Work in pairs. Prepare and practice discussions. You want to know the spelling, the meaning, or the pronunciation of a word. Ask your partner and then ask the teacher.

What does that mean? 3 4 5

- Write *weather* on the board. Point to column 2 of the chart on p. 47. Ask *What does weather mean?* Say *Weather is something that happens in nature.* Ask *How do you spell weather?* Have a student spell weather aloud. Say *When you pronounce a word, you say it correctly.* Write *weather* on the board, and ask *How do you pronounce it?* Have a student respond.
- Say *In class, we can ask our friends for help, or we can ask the teacher.* Point to column 1. Say *"Hey" is informal. We use informal words to ask our friends questions such as "Hey, what does (biodegradable) mean?"* Point to *Excuse me.* Say *We use formal words, like "Excuse me," to ask our teacher questions.* Model an example such as *Excuse me, Mrs. Martinez, how do you spell (enjoy)?*

- 3 Play TR: A41 as students read along in their books. Ask *How does Antoni ask Martina a question?* (Hey, Martina, what does this mean?) *What does he say to Ms. Biga?* (Excuse me, Ms. Biga.)
- 4 Say *A boy and a girl have questions. What do they want to know about?* Play TR: A42 and have students circle their answers. Have students say phrases from the audio that helped them choose their answers.
- 5 Pair students. Give each pair a group of two or three vocabulary words from Units 1–4. Have students use phrases from the chart to ask about spelling, meaning, and pronunciation. Remind pairs to use informal phrases for classmates, formal phrases for the teacher.

Our World in Context

Students in different cultures have varying attitudes about asking teachers questions during class. Students in China, for example, may prefer to ask their classmates for clarification instead of asking a teacher, as it may be considered impolite or disrespectful to interrupt the teacher's lesson. If students decide to ask their teacher a question, they may decide to do it before or after class rather than during class time.

Teaching Tip

Students will continually have questions as they learn a new language. Pause periodically during class to give students a chance to ask questions about the lesson. Encourage students to ask any questions they may have about vocabulary, grammar, or other English-language content they are learning. To help students feel comfortable about asking questions, remind them that all questions are important, even simple questions. Explain that if a student has a question, it's very likely that many other students in the class have the same or a similar question.

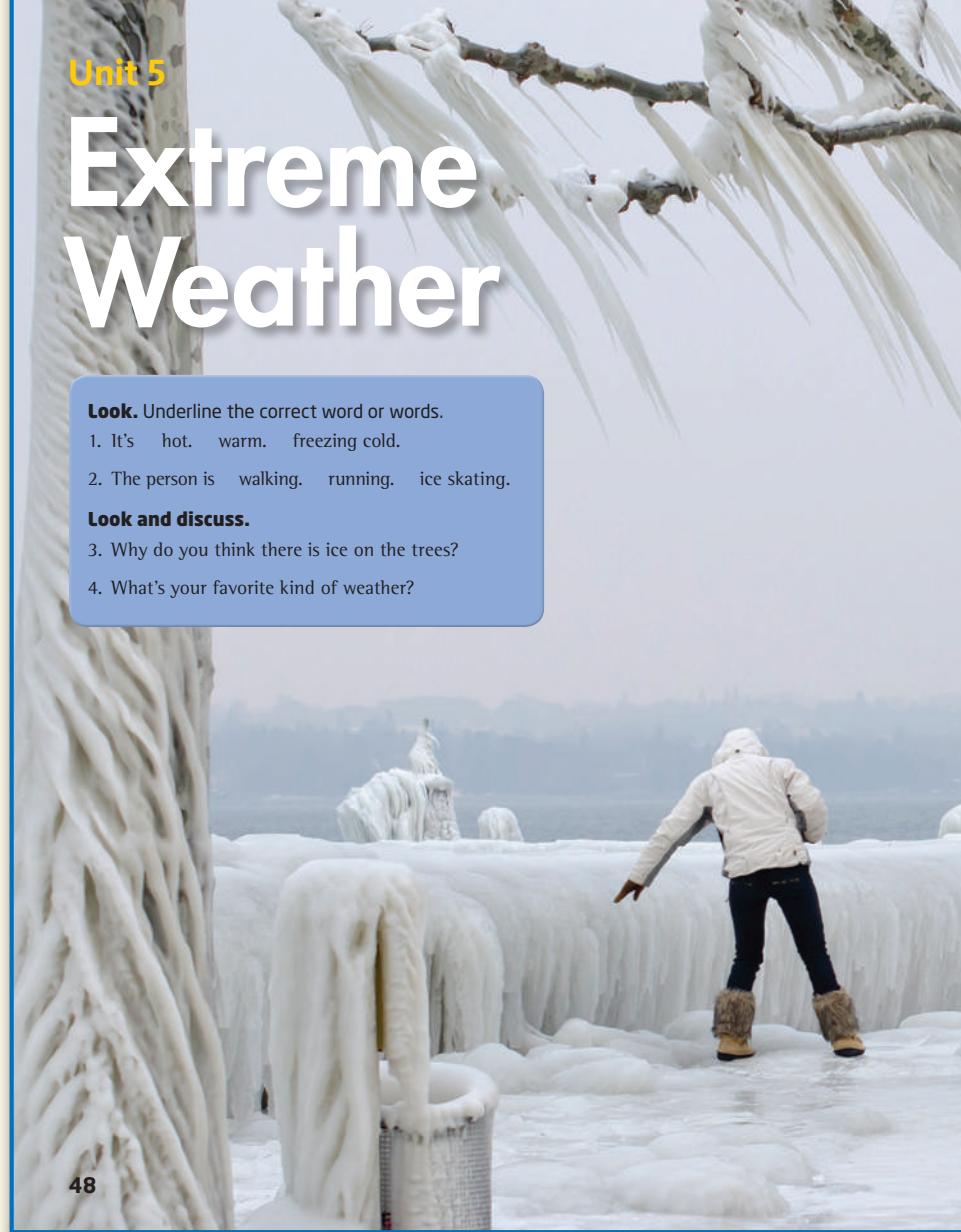
Extreme Weather

Look. Underline the correct word or words.

1. It's hot. warm. freezing cold.
2. The person is walking. running. ice skating.

Look and discuss.

3. Why do you think there is ice on the trees?
4. What's your favorite kind of weather?



48



Versoix, Switzerland

49

Be the Expert

About the Photo

This photo shows someone walking next to a lake in Versoix, Switzerland. A few weeks of very cold, windy weather turn the trees into natural ice sculptures! The wind blows water from the lake onto anything it touches. The cold wind blowing through this region is called the *bise*. Parts of Switzerland get very cold in the winter, with temperatures falling well below freezing.

Our World in Context

The Arctic, which includes the North Pole, and the Antarctic, which includes the South Pole, are the coldest places on Earth. They're also two of the iciest places on Earth. Although these places are cold, they are very dry. Antarctica gets less than two inches of snow each year. Antarctica holds the record for the coldest temperature ever recorded on Earth: -89.2°C (-129°F)!

In This Unit

Theme This unit is about extreme weather and how to prepare for it.

Content Objectives

- Students will
- identify extreme weather and its effects.
 - explain how to prepare for extreme weather.

Language Objectives

- Students will
- talk about types of extreme weather.
 - describe the damage storms can cause.
 - identify ways to prepare for extreme weather.

Vocabulary

Vocabulary 1 *thunder, lightning, a tornado, speed, a hurricane, a storm, a flood, evacuate, a sandstorm, a blizzard, a drought*

Vocabulary 2 *an emergency, a plan, a flashlight, supplies, a shelter*

Grammar

Grammar 1 make predictions about the future with *going to* + verb

Grammar 2 use zero conditional with *If* + present tense

Pacing Guides

LSU5
Mission Understand weather.

Unit Opener

Objective

- Students will
- discuss a photo.

Resources Video: Introduction; Classroom Presentation Tool: Unit Opener; Teacher's Resource CD-ROM: Home-School Connection Letter; Unit Opener Poster

Related Vocabulary

bench, dangerous, fall, icicles, slippery

Introduce

- Say *The name of our next unit is "Extreme Weather." When something is extreme it is very serious.* Raise your hand above your waist and say *When snow is up to here, it's extreme.* Say *When wind blows a tree down, it's extreme. Extreme weather is not safe. When there is extreme weather, we need to be careful and take it seriously.*
- Point out the window. Ask *What's the weather like today? Is it cold?* Rub your hands together and shiver like you're cold. *Is it hot?* Fan yourself like it's very hot.
- **Activate prior knowledge** Ask *What kinds of weather do you know?* (rainy, cloudy, snowy, sunny, windy) Write students' responses on the board. Say *I like when it's snowy. I can play in the snow. My jacket and boots keep me warm.* Ask *What kind of weather do you like? Why?*

- Direct students to the photo on pp. 48–49. Ask questions to encourage discussion of the photo.

What do you see in the photo? (a person, trees, ice)

What is the person doing? (trying to walk)

What is the weather like? (cold, windy)

What is on the ground and trees? (snow, ice)

- Put students in groups. Say *Imagine you're the person in the photo. What are you thinking? How do you feel? Why are you outside? Write about the weather and what you're doing.* Give students three minutes to write one or two sentences. Ask students to share their sentences.
- Guide students through items 1 and 2 on p. 48. Confirm the answers. Read item 3. Ask *What do you think can cause all that ice?* Call on students to share their ideas. Read item 4. Have students respond. List students' favorite weather on the board.

Vocabulary 1

Objective

- Students will
- identify and use words related to types of extreme weather.

Vocabulary *thunder, lightning, a tornado, speed, a hurricane, a storm, a flood, evacuate, a sandstorm, a blizzard, a drought*

Resources Workbook pp. 40–41; Audio CD TR: B2–B3; Video: Vocabulary I; Classroom Presentation Tool: Vocabulary I; Teacher’s Resource CD-ROM: Activity Worksheet 5.1

Materials note cards

Related Vocabulary
thunderstorm, sand

1 Listen and read. TR: B2

2 Listen and repeat. TR: B3

The weather is beautiful and dangerous at the same time. In a thunderstorm, you can hear loud **thunder** and see **lightning**. It’s amazing to watch, but lightning is electricity! If lightning hits people, it can hurt them. People should stay away from trees and go indoors during a thunderstorm.

Wind is a dangerous force. The winds in a **tornado** move at a **speed** of 500 kilometers (300 miles) an hour. A **hurricane** is a powerful **storm** that can also move very fast, although the “eye” at the center is calm. Strong hurricanes can break windows, so people usually prepare by covering their windows. They also buy food and water, because a hurricane can last over a week.

Rain is a strong force. When a lot of rain falls quickly, there can be a **flood**. If the flood is very bad, people **evacuate** their homes and go somewhere safe until the rain stops. It’s always best to move away from extreme weather!

lightning

50



3 Work with a partner. What did you learn? Ask and answer.

51

Be the Expert

About the Photo

The sandstorm pictured in the photo on p. 51 occurred in the state of Arizona in the southwestern United States. The dust cloud was about 80 km (50 mi) wide and 0.8 km (0.5 miles) high. Storm winds reached 64 km (40 mi) per hour. The storm caused many problems, such as vehicle accidents, power outages, fallen trees, and flight delays. Sandstorms this severe are called *haboobs*, which is Arabic for “violent storm.” Haboobs often occur in northern Africa and the Middle East.

Formative Assessment

Can students

- identify and use words related to types of extreme weather?
- Point to the photo of a blizzard on p. 51. Ask *Is this a blizzard or a hurricane?* What happens in a blizzard? Continue with other pictures in the unit.

Review For additional practice, direct students to Activity Worksheet 5.1.

Warm Up

- **Set the stage** Say *Let’s talk about bad weather. For example, sometimes it rains hard. We see lightning in the sky. Shout Boom! Say We hear thunder. It’s windy. Everything gets wet! A storm like this can be scary. But extreme weather is even worse! Extreme weather can make trees fall and houses blow down. Today, we’re going to learn about extreme weather.*
- **Preteach** Say *Storms can be extreme. A big snowstorm is called a blizzard. Write blizzard on the board. Say When it’s warm and humid, hurricanes can happen. Write hurricane and hold up the photo on p. 55 to show a hurricane. Say Hurricanes can be very dangerous. A hurricane’s powerful winds can blow down trees and break windows.*

Present

- Have students turn to pp. 50–51. Point to the hurricane and have students repeat the name. Say *The wind in a hurricane moves very fast.* Point to the tornado. Say *The winds in a tornado are also very fast. They create a column of air that is very destructive.* Point to the sandstorm. Say *In a sandstorm, wind blows sand at high speeds.*
- Say *These are types of extreme weather.* Point to each word on p. 51 and have students repeat.

Practice 1 2

- **1** Say *Let’s listen and learn more about extreme weather. Follow along on pages 50 and 51 as you listen.* Play TR: B2.

- Discuss the paragraphs on p. 50. Ask questions: *What can happen if a storm brings a lot of rain very quickly?* (a flood) *What word tells what people do when it’s not safe to stay in their homes during a bad storm?* (evacuate) *What kind of storm has powerful winds but a calm “eye” at the center?* (a hurricane)
- **2** Say *Now we’re going to hear words and sentences with those words. Repeat each word and sentence after you hear it.* Play TR: B3.
- List on the board: *lightning, a tornado, a hurricane, a flood, a sandstorm, a blizzard, a drought.* Have students draw each word. Call out a word and have students hold up the picture.

Apply 3

- **3** Read the directions for Activity 3 on p. 51. Have two students model the dialogue. Say *Imagine extreme weather happens where you live. Talk about it with your partner.* Give students time to decide on a type of weather and think of questions to ask about it. Write another example on the board: *It’s raining and there are high winds. Is that a hurricane? Yes, it is! Stay safe!*

Wrap Up

- Write the vocabulary words on note cards. Put students in pairs. Have each pair pick a card and describe the word without saying it. The class has to guess the word. Model an example. Say *It hasn’t rained in a long time. Rivers are dry.* (drought)

Objective

- Students will
 - make predictions about the future with *going to* + verb.

Grammar make predictions about the future with *going to* + verb

Academic Language *prediction*

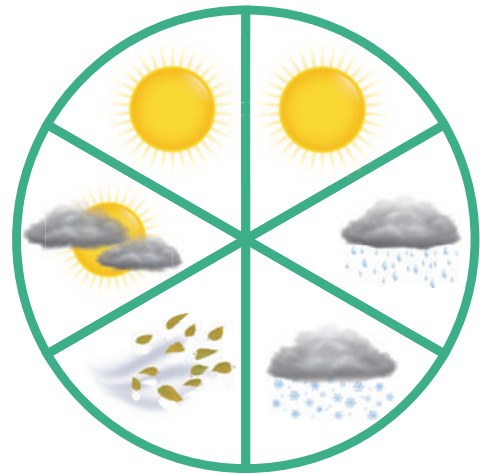
Resources Workbook p. 42, Audio CD TR: B4; Video: Grammar I; Classroom Presentation Tool: Grammar I; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart)

Materials an umbrella (optional); pencils and paper clips

GRAMMAR TR: B4

Is it **going to** rain tomorrow? No, it's **going to** snow tomorrow. I'm **going to** listen to the weather report at 8:00. He's **going to** put on his snow boots.

- 4 Play a game.** Choose a day of the week. Ask your partner about the weather. Spin. Answer your partner's question.



- 5 Work with a partner.** What are you going to do? Ask and answer.

- It's going to rain tomorrow.
- A blizzard is coming.
- You can hear thunder. There's going to be lightning.
- A big storm is coming. It's an emergency!



Warm Up

- Set the stage** Look out the window. Say *It looks dark outside. The sky is full of clouds. I think it's going to rain!* If you have an umbrella, open it. Say *I'm going to open my umbrella.*
- Preteach** On the board, draw a time line. Write *Past* on the left, *Now* in the center, and *Future* on the right. Point to *Past* and say *The past already happened. Yesterday it (rained).* Point to *Now* and say *Now is the present.* Look out the window. *Right now it's (cloudy).* Point to *Future* and say *The future is what is going to happen.* Below *Future*, write *going to.* *Tomorrow it's going to be (sunny).*
- Write the sentence frame *Yes, it's going to _____.* Then ask a question. For example, say

It's cold and cloudy outside. Is it going to snow? Have students use the sentence frame to respond. (Yes, it's going to snow.) Say *It's hot and cloudy outside. Is it going to rain?* (Yes, it's going to rain.)

Present

- Have students look at the Grammar box on p. 52. Play **TR: B4**. Pause for students to repeat the sentences. Write on the board:
- It's going to _____. I'm going to _____.
- Say *It's going to be windy. I'm going to wear a jacket. It's going to rain. I'm going to stay inside.* Help students make their own sentences.

Our World in Context

People have forecasted, or predicted, the weather for thousands of years. The ancient Aztecs and Egyptians were very good at predicting the weather. They used weather patterns to decide when they were going to plant and harvest. These cultures also prayed to gods and goddesses to bring them rain and good weather.

Grammar in Depth

The terms *will* and *going to* are both used to talk about the future. The phrase *going to* is used to make a future prediction that is based on what is happening in the present. For example, if it's cloudy, you might say, "It's going to rain." If you're very tired, you might say, "I'm going to fall asleep." *Will* is used to express facts or things that are generally believed to be true in the future. For example, "The class will end at 4:30." or "The project will continue for two more weeks."

Teaching Tip

Whenever possible, have students offer detailed answers to your questions. Discourage them from giving only one-word answers, such as *yes* or *no*. For example, when students answer *no* to a question, encourage them to follow up with a positive response. Students might respond to the question *Is it going to rain today?* with *No, it's not going to rain. I think it's going to be sunny.*

- Next, make a two-column chart on the board:

Cause: Weather	Effect: What I'm Going to Do
It's going to rain.	I'm going to take an umbrella.

- Say *We can make predictions about the weather. It looks cloudy outside. I think it's going to rain. So, I'm going to take an umbrella.*
- Pair students. Have them copy the chart and write other types of weather. Have them write what they are going to do for each type.

Practice 4

- 4** Draw students' attention to the Activity 4 game. Point to the spinner. Call on students to name each type of weather shown.
- Read the activity directions. Call on a student to be your partner. Have the student demonstrate putting together the spinner. Then say *Let's play!* Ask *What's the weather going to be like on Monday?* Have your partner spin. He then answers your question by describing the weather the spinner points to. (It's going to rain on Monday.) Then it's his turn to ask you about the weather on another day of the week.

- Pair students and have them play the game.

Apply 5

- 5** Say and write *A blizzard is coming.* Ask *How are we going to get ready? What are we going to wear?* (We're going to wear boots and a snow jacket.) Call on several students to answer. Write their answers on the board using the phrase *going to* and read them aloud. Then call on students to read the model dialogue on p. 52.
- Have partners complete Activity 5. Encourage them to include at least two things they are going to do to prepare for each type of weather. Say *Use the model dialogue and the examples on the board to help you answer your partner's questions.*

Wrap Up

- Have students play a guessing game in groups. Have one student think of a type of weather, and then say what she's going to wear or do while she acts it out. Group members guess what the weather's going to be based on her actions.
- Remind students to use *going to* in their guesses. The student acting should also use *going to* when she tells the group what she's doing.

Formative Assessment

Can students

- make future predictions with *going to* + verb?

Ask students *What's the weather going to be like tomorrow?* Have them make predictions using *going to*.

Objective

- Students will
- identify and use words about preparing for extreme weather.

Vocabulary *an emergency, a plan, a flashlight, supplies, a shelter*

Academic Language *summarize*

Content Vocabulary *forecaster, predict*

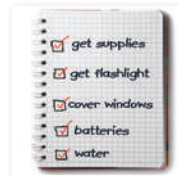
Resources Workbook p. 43; Audio CD TR: B5, B6; Video: Vocabulary 2; Classroom Presentation Tool: Vocabulary 2; Teacher's Resource CD-ROM: Activity Worksheet 5.2

Materials a backpack or bag; a flashlight; food; a bottle of water; a radio; an empty medicine box

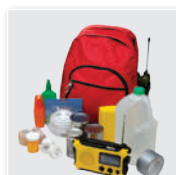
6 Listen and repeat. Then read and write. TR: B5



an emergency



a plan



supplies



a shelter



a flashlight

When a weather forecaster predicts bad weather, you should make a _____ . To protect yourself from bad weather, you can go to a _____ . If the electricity goes off, use a _____ to see in the dark. You can store _____ in a safe place so that you have enough to eat. In an _____ like a hurricane, move quickly but stick to your plan.

7 Listen and stick. Find out what to do next.

Place your stickers in the correct order. Work with a partner. TR: B6

A hurricane is coming. It's an emergency.

Yes, I put emergency in number 1. That's correct.

1

2

3

4

5

53

Warm Up

- **Recycle** Say *What kinds of extreme weather do you remember?* Make a list on the board.
- **Build background** Choose a word on the board and say *Imagine there is going to be a (hurricane). What is going to happen?* (It's going to be windy and rainy. Lights are going to go out. Homes are going to be damaged.) Say *Yes, some of those things are probably going to happen. We need to be prepared.*
- Hold a backpack or bag with some of the following: food, water, a radio, an empty medicine box, a flashlight. Pull out each item and name it. Say *These are my supplies.* Write *flashlight* and *supplies* on the board.
- Say *Extreme weather might cause an emergency.* Say *In an emergency, you may have to evacuate and go to a shelter.* Write *emergency* and *shelter* on the board.

Present

- **Explain** Write the word *plan* on the board and say *We need to make a plan. When we make a plan, we decide ahead of time what we are going to need and what we are going to do.*

Practice 6

- **6** Have students open their books to p. 53. Play TR: B5. Have students repeat each word and sentence.
- Ask questions to have students identify words. For example:
 - I must listen to the news report. If the weather gets worse, what do I need to be ready for?* (an emergency)
 - I need to make a list of things to do in an emergency. What do I need to make?* (a plan)
 - I need to get things like a flashlight, food, and water. What do I need?* (supplies)
- Have students fill in the blanks. Call on students to read the completed sentences. ✓ Say *It's an emergency! The lights are off. What do I need?* (a flashlight) If students have difficulty, direct them to the images on p. 53.

Apply 7

- **7** Assign partners. Ask students to look at Activity 7. Show students the Unit 5 stickers. Say *Look at the stickers. You're going to listen to a plan for what to do in a weather emergency. Look for the sticker that matches each part of the plan. Stick them in order.* Play TR: B6.
- Play TR: B6 again. Have students check their sticker placement. Then have partners use their stickers to summarize the report. Say *When you summarize, you say the important parts again using fewer words.*

Wrap Up

- Have students write an emergency plan for their homes. Write *Emergency Plan* on the board. Say *Copy this title. Number and write five things your family should do in case of an emergency. Write about the supplies you need, how to evacuate, and where you can find shelter for different types of emergencies.* Have students discuss their plans with a partner. Then share the best information from students' plans with the whole class.

Teaching Tip

When students create sentences using new vocabulary, make sure their sentences show an understanding of the words. Some sentences may be accurate but too general to demonstrate understanding. For example, a student might say *I need to get supplies.* Encourage students to add details to show understanding, such as *I need to get supplies like food, water, and a flashlight.*

Students can create flash cards for vocabulary terms for ongoing practice. Have them write the term on one side of the note card. On the other side of the card, have them write the definition, an example sentence, or draw a picture of the word. As students become more familiar with the word on the flash card, have them remove it from their pile. That way, they can use the flash cards to focus on new or difficult words.

Formative Assessment

Can students

- identify and use words about preparing for extreme weather? List the words *emergency, supplies, and shelter.* Have students use the words in a sentence.

Review For additional practice, direct students to Activity Worksheet 5.2.

Objectives

- Students will
 - say what would happen in certain conditions using *If* + present tense.
 - make logical sentences.

Grammar use zero conditional with *If* + present tense

Academic Language *logical, condition, dependent*

Resources Workbook p. 44; Audio CD TR: B7; Video: Grammar 2; Classroom Presentation Tool: Grammar 2; Teacher's Resource CD-ROM: Activity Worksheet 5.3

Materials scissors

GRAMMAR TR: B7
 If the weather **is** cold, I **put on** my winter coat.
 If I **see** lightning, I **go** inside.
 If a sandstorm **comes**, I **close** all the windows.

8 Match and make logical sentences. Work with a partner. Use *if*.

I see lightning when I'm swimming	I look for a boat
it rains	I wear gloves and boots
a storm comes	I try to stay cool
the temperature rises	get out of the water
a flood comes	go inside the house
it snows	I carry an umbrella

9 Play a game. Cut out the cards on page 105. Match and make sentences. Play with a partner.



54

Warm Up

- Say *I check the weather before I leave my house so that I know how to dress. If it's cold, I wear a coat. If it's hot, I wear shorts. If it's rainy, I take my umbrella.* Have students complete this sentence frame: *If it's rainy I take _____.*

Present

- Write the word *if* on the board. Say *We use the word if to talk about a situation that isn't now.*
- Explain** Say *I use if to give the situation. Then I tell what I do in the situation. For example, "If it's dark, I turn on the light."*
- Direct students' attention to the Grammar box at the top of p. 54. Say *You're going to hear sentences about what people do to stay safe. Repeat each*

sentence after you hear it. Play **TR: B7**. Pause after each sentence for students to repeat.

- Write the following on the board. Have students match the parts to form the sentences from the Grammar box.

If...	I...
the weather is cold,	close all the windows.
I see lightning,	put on my winter coat.
a sandstorm comes,	go inside.

- Have students read aloud each completed sentence. Draw lines to connect the sentence parts as students respond.

Practice 8

- 8** Have students read the sentences in the Grammar box on p. 54 again. Then read the instructions for Activity 8 aloud. Say *A logical sentence makes sense.* Give an example: *If it's cold outside, I go swimming. Does that sentence make sense?* (no) Say *Right. It's not logical. If it's cold outside, I play in the snow. Does that sentence make sense?* (yes) Say *Yes, that sentence is logical.*
- Have students complete Activity 8. Have them share their sentences with a partner. Check for logical sentences. Say *Now write three logical sentences of your own.* Give students this sentence frame: *If _____, I _____.*

Apply 9

- 9** Say *Let's play a matching game.* Write this sentence frame on the board: *If _____, I _____.* Pair students and have them cut out the cards on p. 105. Have students find cards that show the weather (green on back). Then, have students find cards that show actions (red on back).
- Have students turn all the cards facedown. Say *Take turns. Pick a weather card and an action card. If they're a match, say a logical sentence.* Tell students to keep the cards that match. Say *The player with the most cards at the end is the winner.*
- Have students write sentences for each match. ✓ Walk around the room, telling students different types of weather. Have students create logical sentences based on the weather.

Wrap Up

- Have students stand in a circle. Have one student say a type of weather. The student next to her says a logical action, and the next student combines the two into a sentence. For example, *It's rainy; bring an umbrella; If it's rainy, I bring an umbrella.*

Grammar in Depth

Sentences with *if* are conditional sentences. All conditional sentences contain a dependent clause and an independent clause. The *if* clause is the dependent clause; it expresses a condition. The independent clause expresses a result of the condition. The *if* clause often comes first, but it can also come near the end of the sentence. The two sentences below have the same meaning.

If she eats pasta, she gets a stomachache.
She gets a stomachache if she eats pasta.

A comma is only used to separate the clauses when the *if* clause begins the sentence. Notice that when the *if* clause comes at the end of a sentence, there is no comma.

Teaching Tip

Students may get into disagreements over whether or not an answer is correct when they play a game. Encourage students to work it out on their own. Explain that you will help them with disagreements if you have to, but that if you do, the person who is incorrect will lose a turn.

Formative Assessment

- Can students
- say what would happen in certain conditions using *If* + present tense?
Write the words *blizzard* and *stay inside* on the board. Have students combine the two to make a sentence with *if*.
 - make logical sentences?
Give students a weather condition. Have them decide on a logical action and form a sentence using *if*.

Review For additional practice, direct students to Activity Worksheet 5.3.

Song

Vocabulary

Vocabulary 1 lightning, thunder, a blizzard, a hurricane, evacuate

Vocabulary 2 an emergency, supplies, a flashlight, a shelter

Grammar

Grammar 1 make predictions about the future with *going to* + verb

Grammar 2 use zero conditional with *If* + present tense

Content Vocabulary safe, grab, seek, howl, waves, rage

Resources Workbook p. 45; Audio CD TR: B8; Video: Song; Classroom Presentation Tool: Song; Teacher's Resource CD-ROM: Activity Worksheet 5.4

Related Vocabulary

palm trees, gusts, tropical storm, ice storm

The Sounds of English

Resources Workbook p. 45; Audio CD TR: B9; Classroom Presentation Tool: The Sounds of English; Picture Cards 53, 54, 57, 68, 122, 306, 307, 375; The Sounds of English Card 15

10 Listen, read, and sing. TR: B8

Bad Weather

There's bad weather on the way!
There's bad weather on the way!

Is it going to storm? Yes, it is!
Is there going to be lightning? Yes, there is!
Is there going to be thunder? Yes, there is!

When there's going to be a storm, I hurry inside!

Be prepared for emergencies.
It's always good to be safe. You'll see!
Grab supplies and a flashlight, too.
Seek shelter. It's the safe thing to do!

THE SOUNDS OF ENGLISH TR: B9

weather

11 Listen and say. Pay attention to the sound of the underlined letters in each word. Can you hear the difference?

th <u>an</u> ks	th <u>i</u> s
th <u>un</u> der	th <u>a</u> t
birth <u>da</u> y	some <u>th</u> ing

55

Use the Song 10

- **Act it out** Say *I see lightning! I can hear loud thunder. I can also hear the wind. I think a storm is going to come! If a storm is coming, I need to make a plan.* Act out making a checklist like the one on p. 53.
- **Predict** Say *Open your books to page 55.* Have students look at the picture. Ask *What do you see?* (palm trees, rain, clouds) Ask *What do you think the song is going to be about?* (storms, bad weather)
- **Activate prior knowledge** Say *We are going to listen to a song about bad weather.* Ask *What kinds of bad weather do you know?* Have students look at p. 55 again. Say *Imagine you're in this storm. Are you going to hear thunder? Are you*

going to see lightning? What else will you see or hear? (a flood, strong winds) Ask *What do you do in a storm like this?* (make a plan, look for shelter, evacuate)

- **10** Play the first ten lines of the song on **TR: B8** (through the first chorus, which begins "Be prepared..."). Say *When you hear a vocabulary word, raise your hand.* After the song, say *Let's see how many vocabulary words we can remember from the song.* Have students call out the words as you write them on the board. (*storm, lightning, thunder, emergencies, supplies, flashlight, shelter*)
- Tell students to open their books to p. 55. Play the first ten lines of the song again and have students sing along.

Extend

- Play **TR: B8** all the way through as students follow along. Complete song lyrics are on p. 95. Then play the song again, pausing after each line that names bad weather and call on students to say what they are going to do. For example, pause after "Is it going to storm? Yes, it is!" Say *What are you going to do?* (take an umbrella, put on a raincoat and boots, close the windows, grab supplies)
- Play the song a third time. Divide the class in half. Take turns pointing to one half of the class to sing along with the questions, and the other half to sing along with the answers.

The Sounds of English: /ð/ as in weather 11

- **11** Display pictures of weather (rainy, snowy, sunny, windy, etc.) or hold up and point to the pictures on Student Book p. 51. Ask *What are these all examples of?* Say *That's right. They're examples of weather (or extreme weather).* Write *weather* on the board, say it, and have the class repeat. Underline *th*. Then say the word again, carefully enunciating the /ð/ sound.
- Say *Now let's listen for other words that have the same /ð/ sound you hear in weather. Some of the words you'll hear make a different th sound. See if you can hear this other sound, too.* Play **TR: B9** once while students listen. Then say *Did you notice the two different th sounds? Let's listen again and say.* Tell students to pay careful attention to the sound of *th* in each word. Play **TR: B9** again and have students repeat the words.
- List *thanks, thunder, birthday, and something* in a column on the board and *weather, this, and that* in another column. Read each column of words, one column at a time, exaggerating the *th* sound. Have students repeat. Then point to a word at random and call on individual students to say the word. Correct pronunciation as needed. Repeat several times with each word.
- To check understanding, display Picture Cards or other pictures that contain the two sounds (/ð/: brother, father, mother, feathers; /θ/: bathroom, mouth, teeth, theater). Say *Listen carefully. Raise one hand if you hear /ð/ as in weather and both hands if you hear /θ/ as in thunder.* If students raise their hands in error, repeat the incorrect word and a word with the correct *th* sound to demonstrate the contrast.

Be the Expert

Our World in Context

Tropical storms and hurricanes are types of extreme weather that happen in the Atlantic, Pacific, and Indian Oceans. The wind speed in a tropical storm is between 63 and 118 km (39 to 73 mi) per hour. If the wind speed reaches 119 km (74 mi) per hour, the tropical storm becomes a hurricane.

Some scientists think that there are going to be more and more hurricanes in the future. They also believe that because of global warming, some of these hurricanes are going to be more powerful.

The Sounds of English Cards

You can use The Sounds of English Card 15 to teach the /ð/ sound. The card and corresponding audio are available on the *Explore Our World* website.

Review For additional practice, direct students to Activity Worksheet 5.4.

Objectives

- Students will
 - describe a tornado.
 - explain how tornadoes form.

Reading Strategy Visualize

Content Vocabulary *columns, twisted, funnel*

Resources Workbook pp. 46–47; Audio CD TR: B10; Classroom Presentation Tool: Reading

Materials colored pencils or markers; photos of tornadoes (*optional*)

Related Vocabulary

thunderstorm, predict, field, research

12 Listen and read. TR: B10

Tornado Trouble

Tornadoes happen all over the world. They are spinning columns of air that come from thunderstorms. The most dangerous tornadoes are very fast. In ten minutes they can break windows, lift trees, and throw cars into the air.

Josh Wurman is a scientist who studies tornadoes. He tries to predict them so that he and his team can save lives. One day Josh Wurman watched a tornado in Tornado Alley. It was amazing. First, the blue sky turned black.

Then a big cloud came toward him and the team. The cloud had winds that moved in a circle. When the cloud touched the ground, it became a tornado.

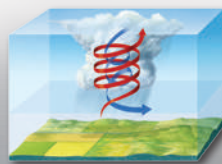
Inside his truck, Wurman watched from a safe distance. The tornado twisted and turned for half an hour. It moved one way, then another way. It looked like a big, gray elephant's trunk. Then suddenly it leaned over like a soft rope. Poof! It was gone!



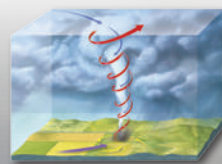
It once rained frogs on a town in Serbia. A small tornado dropped them there.



Step 1 Warm air and cold air come together.



Step 2 The warm air moves up. The cold air moves down.



Step 3 The funnel of wind touches the ground.

13 Work in a small group. Discuss what you should do in a tornado. Use the ideas in the box to help you.

- | | | |
|-----------------------------|--------------------------|--------------------------------|
| drive away from it | hide under a heavy table | sit next to a window |
| stay indoors for 10 minutes | help people | cover your head with your arms |

If you're in a car and you see a tornado, you should drive away from it.



No way! You should get out of the car and lie down in a low-lying place on the ground.

56

Warm Up

- Preteach** Give out colored pencils or markers. Say *I'm going to describe a type of weather. Draw a picture to show the weather I describe. Listen carefully for words that tell how things look.* Say *The sky looks dark. It's full of gray clouds, and it's very rainy. The sky lights up with flashes of bright yellow lightning. The wind is strong and trees are falling over.* Give students time to draw. Repeat the description as necessary.
- Have students hold up their pictures. Say *You used my description to make a picture in your mind. Today, we're going to read about tornadoes. Try to make pictures in your mind as you read.*

Present 12

- 12** Direct students to p. 56. Have a student read the title. Ask *What do you know about tornadoes? How are they different from other storms?* Pass around photos of tornadoes or have students look at the photo at the bottom of p. 56. Have students use the vocabulary words on pp. 50–51 to help them answer your questions.
- Play **TR: B10** and have students read along. Ask *What new information did you learn about tornadoes?* (They happen all over the world; they come from thunderstorms; they spin, twist, and turn; they touch the ground and move in different directions; they can quickly disappear.) List students' responses on the board.

Our World in Context

Extreme weather can make unusual things happen. For example, frogs rained down on a town in Serbia in June 2005. How did that happen? Scientists think they have an explanation.

Sometimes, tornadoes' high winds can suck up water from ponds, lakes, and other bodies of water. In this case, scientists think the tornado sucked up the frogs with the water! The frogs were carried along with the tornado and dropped to the ground miles away.

In a similar case in 2010, there were reports of fish raining from the sky over a small town in Australia!

Reading Strategy

Visualize Creating visual images while reading helps students understand what they read. Have students pay attention to details like color, shape, mood, and movement. To check that students understand what they read, have them draw pictures to illustrate the Reading or to create diagrams about it.

Teaching Tip

When students draw pictures, remind them that their ideas are more important than their artistic ability. Drawing pictures helps students understand what they read and can help them express an idea. Give encouragement and praise for all drawings that reflect ideas, rather than only praising drawings that show the best artistic skill.

Formative Assessment

- Can students
- describe a tornado?
 - Ask students to describe the shape of a tornado and how long it lasts.
 - explain how tornadoes form?
 - Have students draw pictures and use words to explain how a tornado forms.

- Play **TR: B10** again. Ask questions after each paragraph:

Paragraph 1: *What is a tornado? Why are they dangerous?*

Paragraph 2: *What does Josh Wurman do? Why does he try to predict tornadoes?*

Paragraph 3: *How long does this tornado last? How does a tornado move?*

Practice

- Graphic literacy** Have students look at the diagram below the Reading. Say *These pictures show how a tornado forms.* Explain that the pictures show the steps in order. Read the steps. Then ask *What do the red and blue arrows show?* (how warm air and cold air move as a tornado forms)
- Pair students. Have them study the pictures, then tell them to close their books. List the following steps on the board. Have pairs rewrite them on a piece of paper in the correct order:

The warm air goes up and the cold air goes down.

The funnel touches the ground.

Warm air and cold air come together.

- Call on pairs to read the steps. Confirm the order.

Apply 13

- 13** Direct students to Activity 13 and read the directions. Have students read the phrases in the box. Explain that these are things people might do in a tornado. Say *Some of these actions are good things to do. But others are not so good.*
- Have two students read the model dialogue. Ask *Why do you think it's not safe to drive away from a tornado?* Remind students that tornadoes can move very fast.
- Group students to discuss how to be safe in a tornado. Tell them to review the Reading and the model dialogue. When they have finished, have groups share their ideas.

Wrap Up

- Write the following phrases on the board: *tornado leans over and disappears; sky turns black; wind twists into a funnel and touches the ground; wind moves in a circle.* Challenge students to put the phrases in the correct order as fast as they can. Call on students to read the phrases in order.

Mission

Mission Understand weather.

Objective

- Students will
- share ideas.

Resources Video: Meet the Explorer; Mission Poster

Be the Expert

Meet the Explorer

Most people try to stay away from extreme weather. Tim Samaras would drive straight into it. Mr. Samaras chased storms to collect information about them. As a severe storm researcher, Mr. Samaras used instruments to measure a storm's wind speed, temperature, pressure, and direction.

About the Photo

The photo shows storm chasers recording information about a storm in Oklahoma, USA. Storm chasers follow storms in trucks full of instruments, cameras, and satellites.



Mission

- Have students turn to p. 57. Tell students that this is a photo of weather researchers called storm chasers. They are observing some extreme weather to see if it might become a tornado. Point out the word *severe* in the photo caption at the bottom of the page. Say *Saying that weather is severe is another way of saying it's extreme or powerful.*
- Say *Storm researchers gather information to help them understand weather.* Ask students the following questions and write their ideas on the board:
 - What type of extreme weather happens in our area?*
 - Where do you find information about the weather?*
 - How do you prepare for extreme weather?*
- Have students split into small groups. Based on the information on the board, ask the groups to create brochures about tornado research and safety.

Give the Unit Quiz

- Hand out the Unit 5 Quiz. Have students scan the pages. Say *Look at the directions, examples, questions, and pictures. Think about what you know and what you've learned.*
- Give students two or three minutes to preview the test.
- **Listening instructions, Section I** Point to the pictures on p. 69. Say *Look at the pictures.* Point to the letters. *There is a letter next to each picture. Write the letter that matches the sentence you hear.*
- Say *Now listen to an example.* Play **TR: AB36**. (Look at the lightning!) When students have written a letter, ask *What letter did you write?* When students respond with the letter A, begin the quiz. Say *Let's begin.* Play the rest of **TR: AB36**.
- When students have completed Section I, have them put down their pencils. Say *Now you're going to read and write.* Read the directions for Section 2 aloud. Ask *What do you have to do?* (Answer the questions. Use complete the sentences.) Repeat the process for Sections 3 and 4. (3: Circle the correct answer. 4: Read. Circle *True* or *False*.)
- Have students complete Sections 2–4 independently.
- **Listening instructions, Section 5** Read the directions aloud. Ask *What do you have to do?* (Listen. Read. Complete the sentences.)
- Say *Now listen to an example.* Play **TR: AB37**. (I don't like thunder.) When students have completed the sentence, ask *What sentence did you write?* Begin the quiz when students respond with *I don't like thunder.* Say *Let's begin.* Play the rest of **TR: AB37**.
- **Speaking instructions** Point to the images at the top of p. 86. Say *Look at the pictures. Answer my questions. Use complete sentences. Now listen to an example.* Ask *What is this storm?* Point to the top left photo of the blizzard. Say *It's a blizzard.*
- See p. 91 of the Assessment Book for questions and expected student responses.

Assessment

Resources Assessment Book pp. 69–70, 86, 91, 94, 97; Assessment Audio CD TR: AB36, AB37

Be the Expert

Testing Tip

Create a comfortable seating environment. Consider how students are placed in the classroom and determine whether a new seating arrangement is needed. It may be helpful to move students' seats farther apart during testing so there is more space between students, and less opportunity for students to look at one another's answers.

Assess Unit Objectives

Ask questions such as the following:

- *What is a drought?*
- *What happens to plants if there is a drought?*
- *What should you do in an emergency?*

Project For a theme-related closing activity, direct students to the Unit 5 Project Worksheet.

Vocabulary 1 lightning, thunder, a hurricane, a tornado, a sandstorm, a blizzard, evacuate, a flood, a drought, speed

Vocabulary 2 an emergency, a shelter, supplies, a flashlight, a plan

Grammar 1 make predictions about the future with *going to + verb*

Grammar 2 use zero conditional with *If + present tense*

Song Bad Weather

Viewing Exciting weather

Meet the Explorer Tim Samaras

Story Time *The Tale of Thunder and Lightning*

Resources Student Book pp. 48–54, 57; Teacher's Resource CD-ROM: Graphic Organizers (Word web)



Zoom In

Vocabulary

- As you view the vocabulary segments, pause at the images in frames. Have students name each type of weather, action, or object. Press *Play* to bring up the full screen image or caption.

Grammar

- Write the following on the board.

<i>If it's nice out,</i>	<i>If it's windy,</i>
<i>If it's hot,</i>	<i>If it's raining,</i>

- After each segment in Grammar 2, pause and point to the related *if* statement. Ask students to complete the sentence using the words from the segment.

Song

- Play the song and have students listen as they read. Divide the class into three groups. Assign each group a verse. Have the group sing along during their verse. Ask all students to sing the chorus. Play the segment again, with the audio off, and have students sing their verse to the beat.

Viewing

- Pause after each weather segment. Ask *What would you do in (a blizzard)?*

Meet the Explorer

- Say *Storm researchers want to understand extreme weather so they can help protect people.* Ask *What is one way their work protects people?*

Story Time

- View Story Time.
- View the segment again. Pause the video and ask questions such as *What does Lightning do when he is angry?* (He shoots fire and lightning from his horns.)

The Tale of Thunder and Lightning

Long ago, Thunder was a mother sheep and Lightning was her son. When Lightning became angry, he shot bolts of lightning from his horns. This made Thunder yell at him, which shook the ground. Because they caused so much trouble, the king made Thunder and Lightning leave Earth. But that didn't stop the trouble they caused.



Before You Read

- Preteach** Introduce folk tales. Say *Folk tales are stories that are passed down over time. They are usually told aloud. What stories have people in your family told you?* Listen to several students' responses. Then say *Folktales might explain something about the world. Do the stories you know explain something about the world or teach a lesson? If so, they might be folktales.*
- Introduce the strategy** Give students examples to help them understand problems and solutions. Say *I have a problem. I am very thirsty. What should I do?* (drink water) Ask a student to name a problem. Call on another student to offer a solution. Write students' responses on the board.
- Guide the conversation towards problems about extreme weather. For example, say *I am very scared. There is lightning! What should I do?* (find shelter) Continue asking questions about extreme weather and have students suggest solutions.
- Draw a T-chart on the board with the headings **Problems** and **Solutions**. Say *As we read the story, let's use this chart to keep track of the problems and solutions in the story.*

While You Read

- Stop after every few pages to identify problems and solutions.
 - p. 4: *What problems does Lightning cause?*
 - p. 7: *What is the king's solution to the trouble Thunder and Lightning are causing?*
 - pp. 8–9: *Does the king's solution work? What is his new solution?*
 - pp. 10–11: *What problem does the king's new solution cause?*

After You Read

- Say *Imagine you are the king. Can you think of other solutions to the problems caused by Thunder and Lightning?* Have students work in small groups to think of other solutions to the problems in the story. Ask groups to share their answers with the class.

Text Type folktale

Reading Strategy Identify Problems and Solutions

Vocabulary thunder, lightning, a shelter, an emergency

Grammar making predictions about the future with *going to + verb*

Resources Video: Story Time: *The Tale of Thunder and Lightning*; Classroom Presentation Tool: Story Time: Teacher's Resource CD-ROM: Graphic Organizers (T-chart)

Be the Expert

Our World in Context

Worldwide, there are 100 lightning strikes every second. Central Africa receives the most lightning strikes of any region in the world.

Reading Strategy

Identify Problems and Solutions

Identifying problems and solutions helps students understand the situations in a story. It also helps students understand the plot and how the events in the story are connected. It can also help students understand the characters in a story. The problems a character causes or the ways the character solves problems can give insight into the character.

Text Background

This folktale takes place in Nigeria, a country in Western Africa. It has a climate that includes both wet and dry regions. The rainy season is usually longest in the southern part of the country, where it can last from March to November. The rainy season is shorter in the northern regions. The far north has a dry climate with little rain.

Student Book

TR: B2 Unit 5. 1 Listen and read.

The weather is beautiful and dangerous at the same time. In a thunderstorm, you can hear loud thunder and see lightning. It's amazing to watch, but lightning is electricity! If lightning hits people, it can hurt them. People should stay away from trees and go indoors during a thunderstorm.

Wind is a dangerous force. The winds in a tornado move at a speed of 500 kilometers (300 miles) an hour. A hurricane is a powerful storm that can also move very fast, although the "eye" at the center is calm. Strong hurricanes can break windows, so people usually prepare by covering their windows. They also buy food and water, because a hurricane can last over a week.

Rain is a strong force. When a lot of rain falls quickly, there can be a flood. If the flood is very bad, people evacuate their homes and go somewhere safe until the rain stops. It's always best to move away from extreme weather!

- a hurricane
- a tornado
- a sandstorm
- a blizzard
- a drought

TR: B3 2 Listen and repeat.

- | | |
|-------------|--|
| thunder | I'm afraid of thunder. |
| lightning | Did you see the lightning? |
| a tornado | The tornado came very quickly. |
| speed | The wind speeds reached eighty kilometers an hour! |
| a hurricane | The hurricane brought lots of wind and rain. |
| a storm | You should always be prepared for storms. |
| a flood | The rain caused many floods. |
| evacuate | We had to evacuate when the river overflowed. |
| a sandstorm | You can't see in a sandstorm. |
| a blizzard | We didn't go to school because of the blizzard. |
| a drought | Conserve water! There's a drought! |

TR: B4 Grammar

Adult 1: Is it **going to** rain tomorrow?
 Adult 2: No, it's **going to** snow tomorrow.
 A1: I'm **going to** listen to the weather report at 8:00.
 A1: He's **going to** put on his snow boots.

TR: B5 6 Listen and repeat. Then read and write.

- | | |
|--------------|---|
| an emergency | You need to be ready in case of an emergency. |
| a plan | Let's make a plan. |
| a flashlight | Do you have a flashlight? |
| supplies | Don't forget to buy supplies before the storm. |
| a shelter | During the hurricane, many people slept in the shelter. |

TR: B6 7 Listen and stick. Find out what to do next. Place your stickers in the correct order. Work with a partner.

Welcome to your local weather radio report. We have the latest news on the hurricane. It will reach land in two hours. This is **an emergency**. It is important that you take this **emergency** seriously! It is a big storm and it will do a lot of damage. Everyone should follow a **plan** of action. The **plan** will help you stay safe. Then, find a **shelter** to protect your family from high winds. Keep your family together in the **shelter**. Next, make sure that you can see in the dark. Find a **flashlight** and keep it with you. Make sure that the **flashlight** works. The storm may last a long time. You will need food and water. Collect the **supplies** that you need. Keep your **supplies** dry. Also, continue to listen to your radio.

TR: B7 Grammar
 If the weather is cold, I **put on** my winter coat.
 If I **see** lightning, I **go** inside.
 If a sand storm **comes**, I **close** all the windows.

TR: B8 10 Listen, read, and sing.

Note: Lyrics for the song *Bad Weather* are on Student Book p. 95.

TR: B9 11 The Sounds of English /ð/ weather

Listen and say. Pay attention to the sound of the underlined letters in each word. Can you hear the difference?

- | | |
|---------------------|--------------------|
| <u>th</u> anks | <u>th</u> is |
| <u>th</u> under | <u>th</u> at |
| birth <u>th</u> day | some <u>th</u> ing |

Workbook

TR: 25 Unit 5. 2 Listen and circle. Listen for the puzzle words. Circle them on the puzzle in Activity I.

Girl: Last month my town had some extreme weather!
 Boy: Really? Wow! Did you have a hurricane?
 G: A hurricane? No, nothing that bad. But we had a really bad storm.
 B: A storm is smaller than a hurricane.
 G: Yes, but it still made the streets flood.
 B: There was water in the streets?
 G: Yes, there was a flood. I watched the water rise.
 B: Wow! How high?
 G: It wasn't too high. It was just enough to cover your shoes.
 B: What else did you see?
 G: I saw lightning.
 B: Lightning is scary!
 G: I know! And thunder, too.

TR: B10 12 Listen and repeat.

Note: Text for the Reading *Tornado Trouble* is on Student Book p. 56.

B: Thunder scares my cat. He runs under the bed.
 G: He's a scaredy cat!
 B: Scaredy cat! Scaredy cat!

TR: 26 10 Listen and write. Use verses from the song.

Note: Lyrics for the song *Bad Weather* are on Student Book p. 95.

TR: 27 11 Listen. If the letters **th** make the sound you hear in **this**, circle the word. If they make the sound of **th** that you hear in **thing**, underline the word.

this; thing; weather; thunder; three; there; birthday; brother; teeth; breathe; they; thirsty

TR: 28 12 Listen and read.

Note: Text for the Reading *Weather Change* is on Workbook p. 46.

Answer Key

Student Book

Unit Opener SB p. 48

1. freezing cold. 2. walking. 3. Answers will vary but should include words related to very cold weather. 4. Answers will vary.

5 SB p. 52

Answers will vary. Sample answers: 1. take an umbrella 2. wear warm clothing 3. stay inside 4. make an emergency plan

6 SB p. 53

plan, shelter, flashlight, supplies, emergency

7 SB p. 53

1. fifth sticker: an emergency 2. first sticker: a plan 3. sixth sticker: a shelter 4. third sticker: a flashlight 5. fourth sticker: supplies

Workbook

Go to pp. 214–215 for the Workbook Answer Key for this unit.

In This Unit

Theme This unit is about how animals protect themselves from predators.

Content Objectives

- Students will
- describe animal features.
 - explain how animals protect themselves.

Language Objectives

- Students will
- identify animal features.
 - talk about how animals protect themselves.
 - discuss ways animals imitate plants and other animals.

Vocabulary

Vocabulary 1 a predator, a spot, camouflage, prey, hunt, a stripe, poisonous, an insect, species, copy

Vocabulary 2 hide, attack, defend, escape

Grammar

Grammar 1 compare using *as + adj + as*

Grammar 2 check understanding by using tag questions

Pacing Guides

Mission Protect biodiversity.

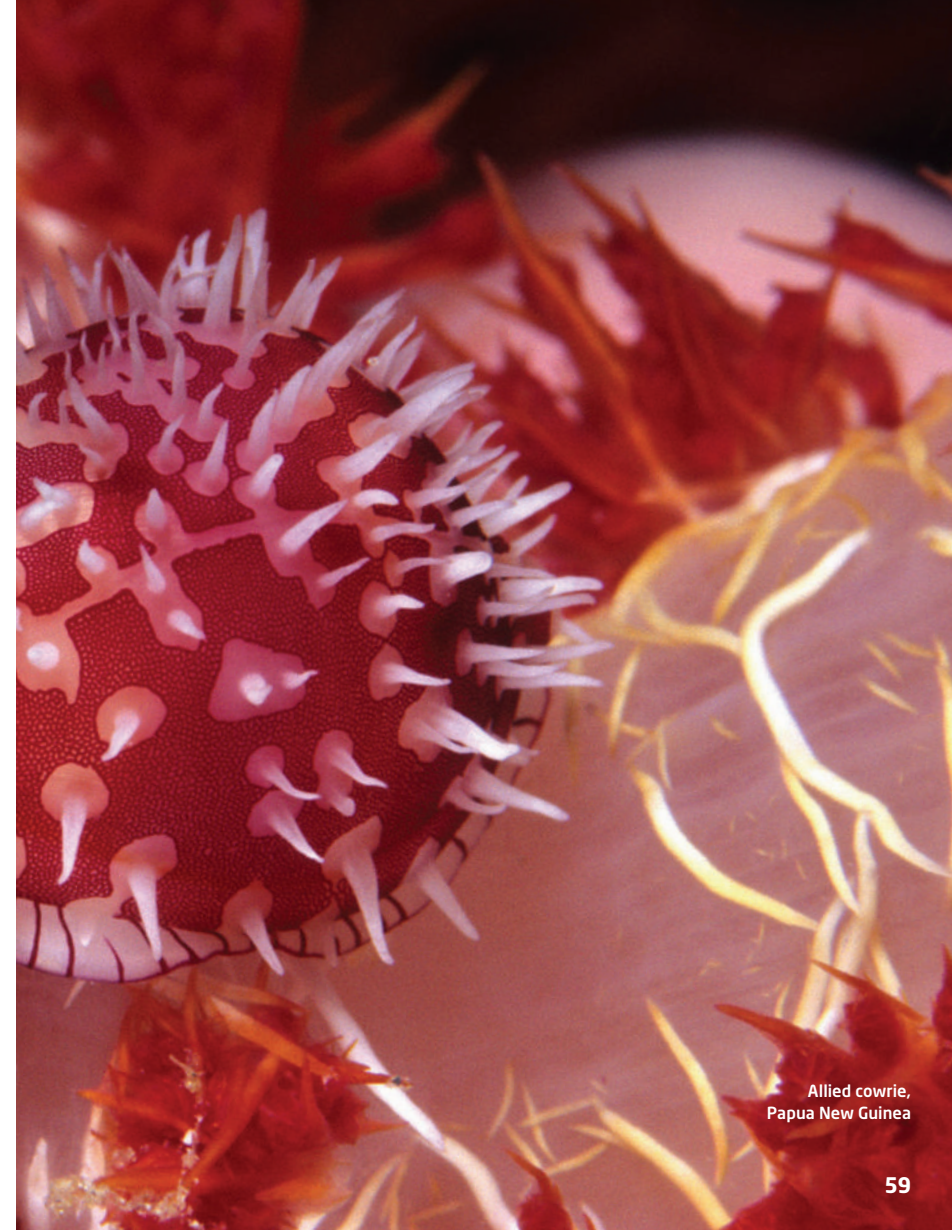
Unit 6

Copycat Animals

Check T for True and F for False. Then answer the question.

1. This animal lives in the ocean. T F
2. It's a different color from the plants around it. T F
3. What do you think this animal eats?

58



Allied cowrie, Papua New Guinea

59

Be the Expert

About the Photo

This photo was taken in Papua New Guinea, an island country in the Southwest Pacific Ocean. If possible, show students where Papua New Guinea is on a world map. With one hand, point to Papua New Guinea, and with the other, point to the students' country.



The photo shows a cowrie, a type of sea snail common in the coastal waters of the Indian and Pacific oceans. Cowrie shells are often brightly colored and may look like soft coral. In the past, cowrie shells were used as jewelry and even as a form of money.

Teaching Tip

Teach students to become active readers by helping them choose a purpose for reading. Before beginning a unit, discuss the unit theme, and ask students what they would like to learn about the theme. List their responses on the board. Have students ask questions on the theme as they read.

Unit Opener

Objective

- Students will
- discuss a photo

Resources Video: Introduction; Classroom Presentation Tool: Unit Opener; Teacher's Resource CD-ROM: Home-School Connection Letter; Unit Opener Poster; World Map Poster

Related Vocabulary

copycat, round, shell, spikes

Introduce

- **Build background** Say *The name of our next unit is "Copycat Animals."* Write *copycat* on the board and underline *copy*. Draw a simple picture of a fish on the board. Next to it, draw another fish just like the first one. Point to the second fish and say *This is a copy of the first picture. It's a copy because it looks the same.*
- Circle the word *copycat* on the board. Say *We're going to learn about copycat animals. People can be copycats. A copycat is a person who copies things that someone else does.*
- **Act it out** Say *I want you to be copycats. Copy what I do.* Raise your right arm. Say *Be a copycat. Put your arm up!* Put your arm down. Say *Be a copycat. Put your arm down!* Continue with various movements, asking students to copy you.
- Ask a student to come to the front of the class. Say *Let's be copycats again. Let's copy (Anna).* Have the student do something the class can copy, such as wave, point, or clap. Repeat with other students.

- Say *Open your books to pages 58 and 59.* Point out the animal in the center of the photo. Say *This animal is a kind of snail.* Ask questions to encourage discussion of the photo:
 - What colors do you see in the photo?* (red, yellow, orange, white, pink)
 - Is the snail difficult to see? Why?* (Yes. It's the same colors as the things around it.)
 - Do you think this a good photo to begin a unit called "Copycat Animals"? Why?*
- Guide students through the activity on p. 58. Read items 1 and 2 aloud. Discuss each statement and confirm the correct answer. (1. T; 2. F) Read item 3. Call on students to respond. Write their ideas on the board. Then say *Some animals copy the colors around them so they can sneak up on the things they like to eat, or hide from the things that want to eat them!*

Vocabulary 1

Objectives

- Students will
- identify and use words about how animals look or act to survive.
 - identify and use words about ways animals protect themselves.

Vocabulary *predator, a spot, camouflage, prey, hunt, a stripe, poisonous, an insect, species, copy*

Content Vocabulary *characteristic, copycat, gazelle, leaf insect*

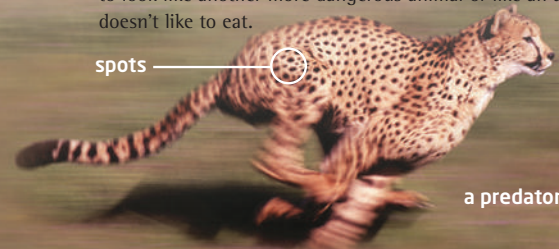
Resources Workbook pp. 48–49; Audio CD TR: B11–B12; Video: Vocabulary; Classroom Presentation Tool: Vocabulary I; Teacher's Resource CD-ROM: Activity Worksheet 6.I

Materials note cards

1 Listen and read. TR: B11

2 Listen and repeat. TR: B12

Some animals can change how they look. They know how to look like other animals, or even like a plant! These copycats are trying to hide from a hungry **predator**. Sometimes they play tricks on the predator. They try to look like another more dangerous animal or like an animal the predator doesn't like to eat.



This cheetah's black **spots** act as **camouflage**. This way, the cheetah doesn't scare its **prey** when it's time to **hunt**.



This colorful frog has **stripes** on its skin. The bright colors tell hungry predators that the frog is **poisonous**.

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they copy the characteristics of other animals or plants in their habitat.

Present

- Say *Open your books again to pages 60 and 61. Say A predator is an animal that eats other animals. A cheetah is a predator. This cheetah is running after the gazelle because it wants to eat it. Say The animals that predators hunt and eat are called prey. The gazelles is the cheetah's prey.*
- Say *An animal's color can help it hide. Point to the cheetah. Say A cheetah's black spots help it hide in tall, dry grass. Colors that help an animal hide are called camouflage.*

Warm Up

- **Brainstorm** Have students look at the animals on pp. 60–61. Say *Some animals have spots. Some animals have stripes. Some can run fast.* Have students close their books. Then say *Think about a tiger. What does a tiger look like? Is it big? Does it have black stripes and orange fur?* (yes) *Does a tiger fly?* (no) *Does it hunt?* (yes) As students answer, write their responses on the board.
- Write *characteristic* on the board. Explain that a characteristic is a way something looks or acts. Point to the tiger sentences on the board. Say *These sentences tell a tiger's characteristics.*
- Say *Today we're going to learn words about copycat animals. These animals copy other animals' characteristics. We'll learn how and why*

Be the Expert

About the Photo

The insect in the photo on p. 61 is called a *leaf insect* or *walking leaf*. Young leaf insects are red, but they turn green after eating leaves.



These butterflies are not the same **species**, but they look like each other. The top one tastes bad. The other one **copies** its shape and colors. It tastes bad, too!



3 Work with a partner. What did you learn? Ask and answer.

How do some frogs show they are poisonous?

They have bright colors.



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Formative Assessment

Can students

- identify and use words about how animals look or act to survive?
Write predator, prey, camouflage, and copies on the board. Have students choose an animal from pp. 60–61 and say a sentence about it using a word from the board.
- identify and use words about ways animals protect themselves?
Have students write and complete the following sentences: A frog's stripes tell predators that it is _____. A leaf insect _____ the color and shape of the leaves around it.

Review For additional practice, direct students to Activity Worksheet 6.I.

Practice 1 2

- **1** Say *We're going to learn more about how some copycat animals avoid predators.* Play TR: B11. Have students listen and read along.
- Discuss the paragraphs on pp. 60–61. Ask questions such as the following:
What acts as camouflage on a cheetah? (spots)
What can a frog's bright colors tell a predator? (It is poisonous.)
Does a predator copy its prey or hunt it? (Hunt it.)
- **2** Say *Now we're going to listen to words and sentences with those words. Repeat each word and sentence after you hear it.* Play TR: B12. Have students repeat each word and sentence. ✓ Ask *Is a cheetah a predator or prey?* (predator) If necessary, review the photos on pp. 60–61.

Apply 3

- **3** Model the dialogue on p. 61. Then pair students. Write *cheetah, leaf insect, butterfly, and frog* on note cards and give a card to each student. Say *Take turns. Ask your partner questions about the animal on your card.* Sample questions might include *What does a cheetah use as camouflage? How does a leaf insect look like a leaf?*

Wrap Up

- Divide the class into two teams. Say *I'll say a word we learned. Raise your hand if you can use the word in a sentence. The first team to use the word correctly wins a point.* Say each of the words in the lesson until students have given correct sentences for all of them.

Objective

- Students will
- compare using *as + adj + as*.

Grammar comparing using *as + adj + as*

Academic Language *choose, compare, opposite*

Content Vocabulary *characteristic, dangerous*

Resources Workbook p. 50; Audio CD TR: B13; Video: Grammar I; Classroom Presentation Tool: Grammar I; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart, Three-column chart, Word web)

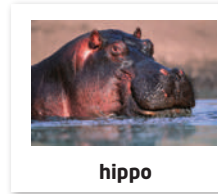
Materials scissors

GRAMMAR TR: B13

That insect is **as green as** a leaf.
Some frogs are **as dangerous as** snakes.
This butterfly is **not as pretty as** the blue one.

- 4 Play a game.** Cut out the cards on page 107. Choose an animal from each group and compare them. Use the words in the box.

fast heavy slow loud
cool cute beautiful ugly



hippo



elephant



Warm Up

- List the following animal names on the board: *elephant, chicken, horse, rabbit, donkey, cow, duck, goat, sheep, turtle, ant, frog*. Have students read the names. Say *Let's sort these animals into two groups: big and small*.
- Draw a two-column chart with the headings **Big** and **Small**. Ask *Is an elephant big or small?* (big) Write *elephant* in the **Big** column. Repeat for each animal in the list on the board.

Big	Small
elephant	chicken

- Say *Look at the animals in the Big group*. Ask questions such as *Which animal is as big as (a goat)?* (a sheep) Say *Right. A sheep is as big as*

a goat. Ask similar questions for the animals in the **Small** column. Then compare across columns. Ask questions such as *Is an elephant as small as an ant?*

Present

- Say *Today we're going to talk about how to compare the characteristics of things. Remember, a characteristic is the way something looks or acts. Size—big or small—is a characteristic*. Choose two large books of the same size. Hold up the books. Ask *Are these books the same size?* (yes) On the board write *This book is as big as the other book*. Point to the underlined words. Say *This is one way to compare things*.

Grammar in Depth

Modifying as + adj + as The words *nearly, nowhere near, and quite* can be used to modify, or change, the meaning of sentences with *as + adj + as*.

Nearly and *nowhere near* can be used to tell about a big difference between two things. Use the construction *isn't nearly as + adj + as*. For example, write *The bicycle isn't nearly as fast as the train*.

Nowhere near also shows large differences. For example, write *A swimming pool is nowhere near as deep as the ocean*.

The adverb *quite* can be used to show a small difference between two things. To compare the similar weights of an elephant and a hippo write *The hippo isn't quite as heavy as the elephant*.

Teaching Tip

Grouping Give students extra practice with an activity by having them work with more than one group. For example, after students have completed a speaking activity, have them repeat the activity with new partners. This repetition builds skill, and helps students gain confidence as they practice speaking in front of different audiences.

- Write *as _____ as* on the board. Say *We can use these words to compare animals, too*. Point to the Grammar box on p. 62. Read aloud the sentences or play **TR: B13**. Write *green* on the board. Say *Let's compare the insect and a leaf. Are they both green?* (yes) *How green is the insect compared to a leaf?* (The insect is as green as a leaf.) Repeat with the other sentences.

Practice 4

- 4** Say *Look at Activity 4 on page 62*. Read the activity directions and help students find and cut out the cards. Then draw a three-column chart on the board:

Group A animal	Characteristics	Group B animal
a horse	big, fast, beautiful	a jaguar
a lion	cool, loud, strong	an alligator

- Have students call out the Group A animals and list them in the first column. Then point out the word box on p. 62. Say *These words can be used to describe the animals*. Have students use words from the box to describe each animal. Add the words to the chart. Then list the Group B animals in the third column.
- Model how to use the chart to form sentences that compare the Group A and Group B animals. Say *A horse is as beautiful as a jaguar*. Ask *How can we use the chart to compare a lion and an alligator?* (A lion is as cool as an alligator.) Have pairs sort their cards according to group, A or B. Then have them read the model dialogue and play the game.

Apply

- Divide the class into two groups. Give word web organizers to students in each group. Have one group write **Objects** in the center circle and the other group write **Animals** in the center circle. Have students in each group brainstorm names of objects or animal names and write them in the outer circles of their webs.
- Then pair students from both groups. Have them identify ways that their animals and objects are alike or not, using the words *as _____ as* or *not as _____ as*. Provide examples: *A hippo is as heavy as a sofa. A dog is as tall as a table*.

Wrap Up

- Walk around the room and point to two objects. Write the name of the objects on the board. Ask students to make comparison sentences using *as _____ as* or *not as _____ as*.

Formative Assessment

- Can students
- compare using *as + adj + as*?
- Have students use *as + adj + as* or *not as + adj + as* to compare classroom objects.

Objective

- Students will
- identify and use phrases related to how animals protect themselves and hunt.

Vocabulary *hide, attack, defend, escape*

Content Vocabulary *leaf insect, water buffalo, deer*

Resources Workbook p. 51; Audio CD TR: B14–B15; Video: Vocabulary 2; Classroom Presentation Tool: Vocabulary 2; Teacher’s Resource CD-ROM: Activity Worksheet 6.2

5 Listen and repeat. Then read and write. TR: B14



hide



attack / defend



escape

1. All predators _____ prey.
2. Many birds put their eggs in the ground or in a tree. They _____ their eggs from predators.
3. Animals always fight hard to _____ their babies and themselves against predators.
4. If a rabbit runs very fast, it can _____ from a bigger animal.

6 Listen. Stick True or False. Work with a partner. Compare your answers. TR: B15

The insect is the same color as the leaf. It's hiding. This is true.

You're right! My turn.

1	2	3	4
---	---	---	---

Warm Up

- Write *predator* on the board. Ask *What is a predator?* (an animal that eats other animals) Ask *What predators do you know?* (cheetah, tiger, crocodile) Ask *What are prey?* (animals that are eaten by predators) Say *Cats eat mice.* Ask *Are mice predators or prey?* (prey)
- Point to the animals on pp. 60–61. Review how different animals protect themselves from predators. Ask questions such as *Why don't predators eat this frog?* (It's poisonous.) *How do predators know that it's poisonous?* (because of its stripes) *Can a predator see this insect on a green leaf?* (no) *Why not?* (because the leaf insect is the shape and color of the leaf)

Present

- Say *Animals need to protect themselves from predators.* Write *defend* on the board. Say *Defend is another word for protect. Let's learn words to talk about how animals defend themselves.*
- Write *attack* and *escape* on the board. Point to *attack* and say *Predators attack.* Give an example: *A lion attacks its prey. The lion attacks the other animal so that it can eat the animal.* Point to *escape* and say *Animals try to escape from predators.* Have students look at the deer on p. 63. Say *The prey is running away to escape from the predator.* ✓ Point to the picture of the gazelle on p. 61. Ask *Is this animal trying to attack or escape?* (escape)

- Write *hide* on the board. Say *To hide means to keep from being seen by a person or an animal. Some animals hide to protect themselves from predators.* Point to the picture of the leaf insect on p. 63. Say *A predator thinks a leaf insect is a leaf. A leaf insect hides from its predators by copying what a leaf looks like.*

Practice 5

- Say *Look at the photos on page 63.* Point to each one. Ask questions such as *Is the leaf insect a predator or prey?* (prey) *Does the lion attack or defend?* (attack)
- 5 Say *Let's hear more about predators and prey.* Play TR: B14. Ask students questions about the photos such as:
 - How does a leaf insect hide from predators?* (by looking like a leaf)
 - How can the water buffalo defend itself?* (by stabbing the lion with its horns; by shaking the lion off and stomping on it)
 - How does the deer escape?* (by running away)
- Read aloud the sentences in items 1–4. Say *Use the words in the photo captions to complete these sentences.* Have students complete the activity items on their own. Check answers as a class. ✓ Ask *Do predators attack or defend their prey?* (attack)

Apply 6

- 6 Say *Let's do a sticker activity.* Assign partners. Say *We're going to hear sentences about predators and prey. If the sentence is true, put a true sticker in the box. If it's wrong, put a false sticker in the box.* Play TR: B15. Model completing the first item. Have students complete the activity together and discuss why the false sentences are incorrect.

Wrap Up

- Put students in small groups and have each group member choose an animal to talk about. Say *Tell the group about your animal. Is it a predator or prey? How does it defend itself? Does it hide from its predators? What animals does it attack?* Write sample questions on the board as a reminder to students.

Our World in Context

Some animals' camouflage changes with the seasons. For example, the Arctic fox has white fur in the winter when it lives on snow. In the summer, its fur changes to a brown color to better match its habitat. These changes help the fox hide from predators.

Some animals use camouflage that doesn't match their habitat. Zebras' black and white stripes look very different from the brown grasslands they live in. However, when many zebras are together, their black and white stripes make it difficult for predators to tell one zebra from another. This makes it easier for the zebras to escape from predators.

Teaching Tip

It may be difficult for a student to learn a vocabulary term by looking at just one picture. Whenever possible, show students a variety of photos or drawings. If a computer is available to you, an Internet search can provide many pictures to use.

Formative Assessment

- Can students
- identify and use phrases related to how animals protect themselves and hunt?
- Ask questions such as *How does a leaf insect hide from predators?* *How does a deer escape predators?*

Review For additional practice, direct students to Activity Worksheet 6.2.

Objective

- Students will
 - check understanding by using tag questions.

Grammar check understanding by using tag questions

Academic Language check, tag question, verb

Resources Workbook p. 52; Audio CD TR: B16–B17; Video: Grammar 2; Classroom Presentation Tool: Grammar 2; Teacher’s Resource CD-ROM: Graphic Organizers (Two-column chart), Activity Worksheet 6.3

Materials scissors

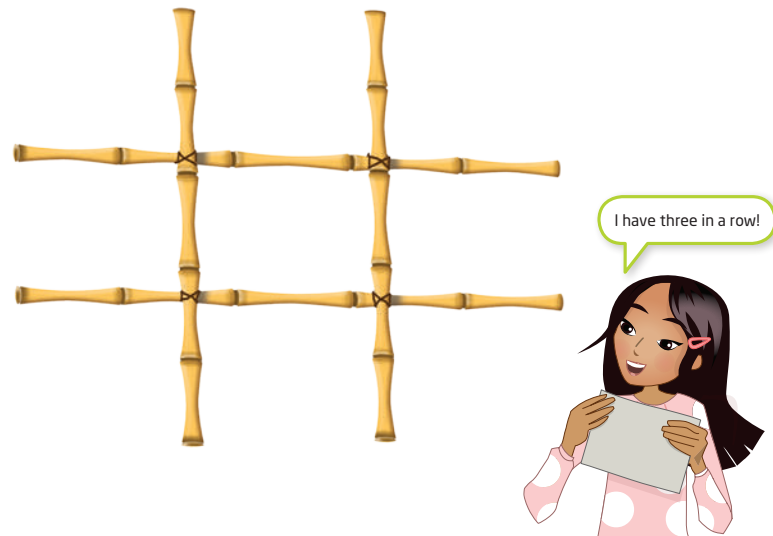
GRAMMAR TR: B16

Lightning **is** dangerous, **isn't it?** That frog **wasn't** poisonous, **was it?**
 Sharks **are** scary, **aren't they?** The boy **escaped** the dog, **didn't he?**
 This insect **looks** like a stick, **doesn't it?** The dogs **were** loud, **weren't they?**
 Your friends **don't** eat meat, **do they?** The cats **weren't** friendly, **were they?**

7 Read. Underline the correct answer.

1. It's very hot, doesn't it? / isn't it?
2. It was really hot yesterday, didn't it / wasn't it?
3. Cats like sleeping in the sun, doesn't it / don't they?
4. Baby penguins are so cute, aren't they / weren't they?
5. That wasn't a bad movie, was it? / did it?

8 Play a game. Cut out the question tags on page 107. Choose nine and glue them to the grid. Then listen. If you have the tag, draw an X on the square. TR: B17



Warm Up

- Preteach** Write *A cheetah is a predator.* Say *Sometimes we want to check that we're right about an idea. We can add a question to ask if we are right.* Erase the period and replace it with a comma and add the tag question *isn't it?* Read aloud the new sentence *A cheetah is a predator, isn't it?* Have students repeat the tag question after you. Say *The "isn't it?" question at the end of the sentence is called a tag question.*

Present

- Write the following on the board:

A cheetah is fast, isn't it? is → isn't
 A cheetah isn't slow, is it? isn't → is

- Read the first sentence aloud, emphasizing the tag question. Say *The first part of the sentence includes the verb is.* Circle *is.* *The tag question should include the opposite of is.* The opposite of *is* is *isn't.* Circle *isn't.* Draw a line to connect *is* and *isn't* in the sentence. Read aloud the sentence and have students repeat it. Repeat the process with the second sentence.
- Say *Look at the Grammar box on page 64.* Point out the sentences with the words *looks* and *escaped.* Explain that these are action words and students must use a form of *to do* with these tag questions. On the board, write *This insect looks like a stick, doesn't it?* Circle *looks* and *doesn't.* Say *Looks is an action word that tells about the present. The sentence tells about one insect. So, we use doesn't as opposed to don't.* Explain that the sentence with *escaped* follows the same rule but uses *didn't* because it tells about the past.

Grammar in Depth Using Intonation with Tag Questions

People ask tag questions for two main reasons: to show that they do not know the answer, or to show that they do know it. In the latter case, the tag question is added to support or confirm what the person already knows.

If someone uses a tag question to show uncertainty, the tag question has a rising intonation. The voice gets higher at the end of the question. For example, if someone doesn't know whether or not a deer escaped from a predator, he would ask *The deer escaped, didn't it?* ↗

If someone uses a tag question to confirm what she already knows, the intonation of her voice drops at the end of the tag question. For example, if someone thinks a butterfly is beautiful, she might say *The butterfly is beautiful, isn't it?* ↘

- Point out the sentence with the words *eat meat.* Have students read it aloud together. Ask *What is the action word in this sentence?* (eat) *Why does the word don't come before eat?* (to make the sentence negative) Explain that in negative sentences, the verb is preceded by *doesn't* or *don't,* and the corresponding tag questions use *does* or *do.*
- Play TR: B16. Say *Listen to these sentences as they're read aloud.*

Practice 7

- Write the following on the board:

is → isn't	do → don't
are → aren't	does → doesn't
was → wasn't	did → didn't
were → weren't	

- Say *Remember that in tag questions the verbs have to be opposites. If the sentence includes was, the tag question should include the word wasn't.* Read the remaining pairs of opposites with students.
- 7** Read item 1 aloud. Ask *What is the verb?* (is) *What is the opposite of is?* (isn't) Write *It's very hot, isn't it?* Point out that *doesn't* is not correct because the verb *is* is not an action word.
- Have students complete the activity. Remind students that in item 3, they will use a form of *to do* because of the action words in the sentence. ✓ Ask *If the first part of a sentence includes the verb wasn't, what verb will be in the tag question?* (was) If students have difficulty, have them look at the sentences in the second column of the Grammar box.

Apply 8

- 8** Have students cut out nine question tags from p. 107. Say *Glue one tag question in each space of the game board. Each sentence you hear is missing a tag question. If you have the missing tag question on your board, draw an X on it. If you get three in a row, you win!*
- Prepare a game board before class and use it to model how to play the game. Play TR: B17 and pause the audio after the first sentence. Cross out the tag question *don't they?* on your game board. Then play all of TR: B17 as students play the game.

Wrap Up

- Say *Today we learned how to use tag questions, didn't we?* Write *was, wasn't, is, isn't, do, and don't* on individual slips of paper. Have students choose a slip of paper and write a tag question about any topic using the verbs on their paper. Call on students to read their questions aloud to the class.

Formative Assessment

- Can students check understanding by using tag questions?
 Write the following on the board. Have students look at the underlined verb and write the correct tag question.
The tiger is attacking its prey, _____?
The bird doesn't swim, _____?
The deer escaped, _____?

Review For additional practice, direct students to Activity Worksheet 6.3.

Song - The Sounds of English

Song

Vocabulary

Vocabulary 1 an insect, copy, predator, camouflage, prey, hunt, a stripe

Vocabulary 2 hide, escape

Grammar

Grammar 1 compare using as + adj + as

Resources Workbook p. 53; Audio CD TR: B18; Video: Song; Classroom Presentation Tool: Song; Teacher's Resource CD-ROM: Activity Worksheet 6.4

Related Vocabulary

fins, spines, survive, imitate, resemble

The Sounds of English

Resources Workbook p. 53; Audio CD TR: B19; Classroom Presentation Tool: The Sounds of English; Picture Cards 95, 124, 164, 305, 376, 387, 427; The Sounds of English Card 8

9 Listen, read, and sing. TR: B18

It's a Wild World

It's a wild world!
It's work to stay alive!
Animals do amazing things
in order to survive.

An insect that looks like a leaf
copies plants to get relief.
Predators are everywhere,
and looking for a feast!

THE SOUNDS OF ENGLISH TR: B19

crazy

10 Listen and say the words. Pay attention to the sound of the underlined letter in each word.

- zoo zebra
- amazing poisonous
- isn't it wasn't it

Lionfish,
Indonesia

65

Use the Song 9

- **Activate prior knowledge** Say *We learned about predators and prey.* Ask *What is a predator?* (an animal that hunts other animals) *What is prey?* (animals that other animals eat)
- Ask *How do animals hide from their predators?* (They use camouflage. They copy other animals or plants.) Have students name animals and tell how they hide from predators.
- Say *Open your books to page 65. The animal in the photo is a lionfish. How do you think it hides from its predators?* (It uses camouflage.) Say *It has another way of staying alive too. It is poisonous. Why does being poisonous help an animal survive?* (An animal that eats it will get sick or die.)
- 9 Say *Now we're going to hear a song about animals. Listen for vocabulary words.* Play the first eight lines of the song (TR: B18). Play them again and ask *What vocabulary words did you hear?* (insect, copies, predators) Write the words on the board.
- Play TR: B18 all the way through as students follow along in their books. Complete song lyrics are on p. 95. Ask *What is the song about?* (how animals hunt or hide to stay alive; how animals like insects and frogs use camouflage to escape predators) Have students call out other vocabulary words in the song and list them on the board with the other three words. (camouflage, hide, prey, hunt, stripes)

Extend

- Play the following lines from the song as students sing along: "The hunter and the hunted/predator and prey/must hunt or hide to stay alive." Write *hunter* and *hunted* on the board. Say *A hunter looks for food to eat. What other word did we learn for an animal that hunts for food?* (predator) Say *The hunted must hide to stay alive. What other word did we learn for an animal that hides from a predator?* (prey)
- On the board, write *A pretty frog can be as _____ as a snake.* Sing or play the following line "A pretty frog can be as deadly as a snake." Ask *How is the frog like a snake?* (It is as deadly as a snake.) Have students complete the sentence.
- Replay "An insect that looks like a leaf." Say *The insect looks like a leaf.* Ask *What color is the insect?* (green) Have students use their answer to complete the sentence frame *It is _____ a leaf.*

The Sounds of English: /z/ as in crazy 10

- 10 Display a picture of a zebra or Picture Card 305. Ask *What's this?* Write *zebra* on the board, say *zebra*, and have the class repeat. Underline *z*. Then say the word again. Next, display a picture of a desert or Picture Card 427. Ask *What's this?* Say *That's right. It's a desert.* Write *desert* on the board next to *zebra*. Then say *desert*, emphasizing the /z/ sound and have the class repeat. Ask *What letter makes the /z/ sound in desert?* (s) Underline the *s* in *desert*. Say both words, pointing to the underlined letters, and have students repeat. Say *Sometimes s makes the same sound as z.*
- Say *Now let's listen to other words that have the same /z/ sound you hear in zebra.* Play TR: B19 once while students listen. Then say *Let's listen again and say the words.* Play TR: B19 again and have students repeat the words.
- To check understanding, have ready the Picture Cards for *closet, nose, cousin, zebra, museum, zoo, and desert*, as well as some cards for words that do not include the target sound.
- Hold up a card or picture, say the word, and have students raise their hands if they hear the target sound. Say *Look and listen. Raise your hand if you hear /z/ as in zebra.* If students raise their hands in error, repeat the incorrect word and a word with the target sound to demonstrate the contrast.

Be the Expert

About the Photo

This photo shows a shortfin lionfish. These fish use their fins to protect themselves. Lionfish have fins with sharp spines that can put poison into any predator that tries to attack them.

Teaching Tip

Students need to hear a song several times in order to sing and understand all the words. Divide a song into manageable parts. This will give students time to get used to the rhythm of the music and the pronunciation of the words. You can also divide a song among student groups, so that each group focuses on just one part of the song.

The Sounds of English Cards

You can use The Sounds of English Card 8 to teach the /z/ sound. The card and corresponding audio are available on the *Explore Our World* website.

Objectives

- Students will
 - describe how animals imitate other animals and plants to survive.
 - summarize the passage.

Reading Strategy Scan Text for Information

Academic Language summarize

Content Vocabulary seaweed, imitates, floating, transparent

Resources Workbook pp. 54–55; Audio CD TR: B20; Classroom Presentation Tool: Reading; Teacher’s Resource CD-ROM: Graphic Organizers (Two-column chart)

Related Vocabulary

aquarium

11 Listen and read. TR: B20

The Copycat Dragon

The leafy sea dragon is a weird but beautiful copycat. From its name you’d think it’s a kind of dragon, wouldn’t you? But no, the leafy sea dragon gets its name from its funny shape.

The leafy sea dragon copies what’s around it. It lives in seaweed, and so its body looks like a seaweed leaf. The sea dragon imitates the shape and color of seaweed, and it even looks like floating seaweed when it moves! It doesn’t use the parts of its body that look like leaves to swim. It uses fins that are transparent, so it’s hard to see them move.

The leafy sea dragon doesn’t only look like a copycat. It also dances like a copycat. A male and female sea dragon will copy each other’s movements for hours!



12 Work with a partner. Number the facts. Decide which fact is the most interesting (1) and the least interesting (4).

- _____ Its name
- _____ Its color and shape
- _____ The tricks it plays on its prey
- _____ How it moves and dances



One kind of spider tricks predators by imitating an ant. It holds two legs up to look more like an ant when it walks.



66

Warm Up

- **Activate prior knowledge** Write *copycats* on the board. Ask *What is a copycat animal?* (an animal that looks like something else) Ask *What copycat animals have we talked about?* (butterflies, leaf insects) Ask *Why do some animals copy other things?* (to hide, to escape from predators)
- Ask *What does a leaf insect resemble* (a leaf) *What do some butterflies copy?* (the shape, color, and taste of other butterflies)

Present 11

- Say *Let’s talk about another copycat animal. Turn to page 66 and look at the photos. The photos show a copycat animal called a leafy sea dragon.*

- Tell students the leafy sea dragon is actually a fish that’s similar to a sea horse. Point to the leafy parts of its body. Ask *What do these body parts look like?* (leaves) Point to the plants in the aquarium the mascots are looking at. Say *These plants are seaweed.* Ask *Does the leafy sea dragon look like seaweed? Is it the same color? Is it the same shape?*
- **11** Say *We’re going to read about how the leafy sea dragon copies the seaweed plants around it.* Play **TR: B20** and have students read along. Then play **TR: B20** a second time. Pause and ask questions such as the following:

Paragraph 1: *How does the leafy sea dragon get its name?*

Paragraph 2: *What does the leafy sea dragon copy? What does it use to swim?*

Paragraph 3: *Leafy sea dragons don’t just copy seaweed. What else do they copy? How do they do it?*

- **Think Aloud** Model guessing meaning from context. Say *The reading says the leafy sea dragon’s fins are transparent. I’m not sure what transparent means. I read that the sea dragon doesn’t use the leafy-looking parts of its body to swim. But the leafy parts are all you see! Then I read that it’s hard to see the fins. Maybe they have no color. I guess if a thing is transparent, you can see through it. I’ll look that word up in the dictionary.*

Practice 12

- Say *Let’s listen to “The Copycat Dragon” one more time.* Play **TR: B20**. When the track ends, say *I think the leafy sea dragon is a very cool copycat! It has a great name, it looks amazing, and it dances!* Ask *What do you think is the most interesting thing about it?*
- **12** Pair students. Read aloud the directions for Activity 12. Have two students model the dialogue. Make sure students understand that they write number 1 on the line by the fact they think is the most interesting, 2 by the next most interesting fact, and so on. Say *Discuss the facts with your partner, but you don’t have to agree. There is no one correct way to number the facts.*
- When students are finished, write the four facts on the board. Take a survey of how many students named each fact their most favorite. Add the numbers to the board and discuss.

Apply

- Tell students that summarizing means retelling the important parts of a text or story in your own words. Say *When you read something interesting, it’s fun to tell your friends about it. Summarizing helps you remember what you want to share.* Have students form groups of three to summarize “The Copycat Dragon.” Model how to summarize how a leafy sea dragon moves. Say *A leafy sea dragon has transparent fins that help it move. The leafy parts of its body don’t help it move.* Then have group members work together. Tell them to use the facts on p. 66 to help them summarize the important parts of the Reading.

Wrap Up

- Ask students questions about copycat animals. Ask *Why do these animals copy?* (to escape from predators) *What kinds of things do they copy?* (the plants around them; other animals) Say *Imagine you’re a copycat animal.* Ask *Would you be a leafy sea dragon? Or would you like to be a leaf insect?* Have students raise their hands and say which animal they would like to be and why.

Our World in Context

Not all copycat animals live in the water. Many can be found in deserts, grasslands, and forests. Some spiders in the forests near Lake Victoria in Africa mimic ants so they can attack other spiders. These spiders do more than just resemble ants. They also act like ants. For example, some spiders live in silk houses and travel in groups, just like ants. Copying ants helps these spiders be better predators.

Reading Strategy

Summarize To help students summarize, have them underline key details in the reading. Ask students to focus on the basic questions of What, Where, Why, and How. Emphasize that students should use their own words to summarize a text or story.

Formative Assessment

- Can students
 - describe how animals copy other animals and plants to survive? Ask *How does a leafy sea dragon hide from predators? What do male and female sea dragons copy when they dance?*
- summarize the passage? Have students reread paragraph 2. Ask students to summarize, or retell, the paragraph in their own words.

Mission

Mission Protect biodiversity.

Objective

- Students will
- share ideas.

Resources Video: Meet the Explorer: Krithi Karanth; Mission Poster

Be the Expert

Meet the Explorer

As a child, Krithi K. Karanth explored the jungles of India with her father and developed a love for India's incredible wildlife. Krithi works hard to protect animal species in India. It is difficult work. As the human population continues to grow, there is less protected land for animals such as Asian elephants, jaguars, and tigers.

Krithi's challenge is to discover how humans and animals can live together peacefully in India. Through surveys and mapping, she hopes to gather information that will help strengthen India's national parks and teach people about tolerance for wildlife. She also wants to help people who have suffered from conflict with animals. Her goal is for India to be a country in which animals and people can live together successfully.

About the Photo

This photo shows a Siau Island tarsier. These small animals live on the small Indonesia island of Siau. There are few of these tarsiers left. Eruptions from volcanoes have destroyed much of their habitat. Local hunters also hunt them for food.

Protect biodiversity.

How are the species of animals in this unit different? Why is it important to preserve this diversity?



A tarsier



Krithi Karanth
Conservation Biologist
Emerging Explorer

"We need to increase people's interest and awareness about wildlife and conservation issues and reduce the general disconnect from nature."



67

Mission

- Have students turn to p. 67. Point out the term *biodiversity*. Say *Biodiversity means there are many different types of animals and plants in an environment.* Say *It is important to protect biodiversity. Think about the animals we learned about in this unit.* Then have a student read the caption next to the tarsier.
- Put students in groups. Encourage a discussion about the importance of protecting biodiversity. Ask questions such as:
 - What happens when we don't protect biodiversity? What might happen to prey if predators disappear?*
 - What are the habitats of the copycat animals we learned about? How can we protect these habitats?*
- Say *Now let's think about biodiversity in our community.* Ask questions such as:
 - What plants and animals live in our community?*
 - Do you think some of these plants and animals need protection? How can we protect biodiversity in our community?*

Give the Unit Quiz

- Hand out the Unit 6 Quiz. Have students scan the pages. Say *Look at the directions, examples, questions, and pictures. Think about what you know and what you've learned.*
- Give students two or three minutes to preview the test.
- **Listening instructions, Section 1** Point to the pictures on p. 71. Say *Look at the pictures.* Point to the letters. *There is a letter next to each picture. Write the letter that matches the sentence you hear.*
- Say *Now listen to an example.* Play **TR: AB38**. (This predator has sharp teeth, claws, and a long tail.) When students have written a letter, ask *What letter did you write?* When students respond with the letter *E*, begin the quiz. Say *Let's begin.* Play the rest of **TR: AB38**.
- When students have completed Section 1, have them put down their pencils. Say *Now you're going to read and write.* Read the directions for Section 2 aloud. Ask *What do you have to do?* (Complete the questions. Use words from the box.) Repeat the process for Sections 3 and 4. (3: Write sentences. Compare the animals. 4: Read. Circle *True* or *False*.)
- Have students complete Sections 2–4 independently.
- **Listening instructions, Section 5** Read the directions aloud. Ask *What do you have to do?* (Listen. Read. Answer the questions.)
- Say *Now listen to an example. Write the answer to the question.* Play **TR: AB39**, pausing after (What does camouflage do?) When students have answered the question, ask *What answer did you write?* Begin the quiz when students respond with *Camouflage helps animals to hide.* Say *Let's begin.* Play the rest of **TR: AB39**.
- **Speaking instructions** Point to the image at the bottom of p. 86. Say *Look at the pictures. Answer my questions. Use complete sentences. Now listen to an example.* Say *Compare the zebra (point) to the horse (point).* Ask *How are they the same?* Say *The shape of the zebra's face (point to the shape of the zebra's face) is the same as the shape of the horse's face (point to the shape of the horse's face).*
- See p. 91 of the Assessment Book for questions and expected student responses.

Assessment

Resources Assessment Book pp. 71–72, 86, 91, 94, 98; Assessment Audio CD TR: AB38, AB39

Be the Expert

Testing Tip

Focus on the positive. Remind students to focus on what they know, and to come back to difficult questions at the end. Explain that it's okay if they do not remember something; they will have time to review things they didn't remember after the test.

Assess Unit Objectives

Ask questions such as the following:

- *What is camouflage?*
- *How can animals protect themselves from predators?*
- *Some frogs are colorful. What do the bright colors tell predators?*

Project For a theme-related closing activity, direct students to the Unit 6 Project Worksheet.

Vocabulary 1 *hunt, copy, an insect, species, predator, prey, poisonous, camouflage, a stripe, a spot*

Vocabulary 2 *hide, attack, defend, escape*

Grammar 1 compare using *as + adj + as*

Grammar 2 check understanding by using tag questions

Song *It's a Wild World*

Viewing animal characteristics

Meet the Explorer Krithi Karanth

Story Time *How Tiger Got His Stripes*

Resources Student Book pp. 58–64, 67; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart)



Zoom In

Vocabulary

- Fast forward, stopping at the images in frames. Ask students to identify the action or characteristic. Press *Play* to bring up the full-screen image and caption.

Grammar

- Write *frog, insect, and fish* on the board. Assign an animal to each student. View Grammar 1. Say *Listen for your animal. Write about what your animal is like, using as + adj + as.*

Song

- Have students write the sentence frames below. As they listen to the song, have them fill in the correct word or words.

An insect that looks like a leaf _____ plants to get relief.

Animals _____ in front of our eyes, every day.

A pretty frog can be _____ a snake.

Viewing

- After viewing, ask students to describe how the animals they saw protect themselves.

Meet the Explorer

- Say *Krithi Karanth believes it is very important to protect animal habitats.* Ask *What are ways you can help protect animal habitats?*

Story Time

- View *How Tiger Got His Stripes* once with students.
- View it again. Pause the video and ask questions such as *Why is Tiger's bright orange fur a problem? (His prey can see him.) What special power does the man have? (wisdom) What does the rope do to Tiger's fur? (It makes black stripes on Tiger's fur.)*

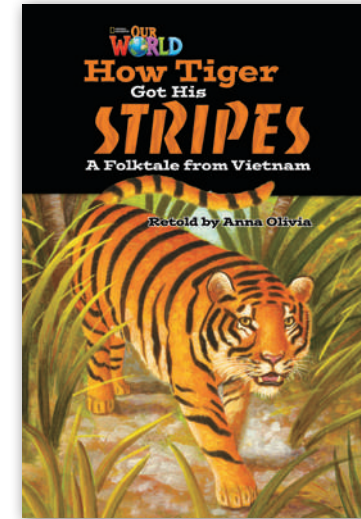
Text Type folktale

Reading Strategy Identify Cause and Effect

Vocabulary *a stripe, hunt, prey, defend, attack, escape, camouflage, hide, predator, a spot, an insect*

Grammar compare using *as + adj + as*; check understanding by using tag questions

Resources Video: Story Time: *How Tiger Got His Stripes*; Classroom Presentation Tool: Story Time; Teacher's Resource CD-ROM: Graphic Organizers (T-chart), World Map Poster



How Tiger Got His Stripes

Many years ago Tiger's fur was all orange. But one day Tiger was tricked by a man, and that trick led to Tiger's fur getting stripes. What was the man's trick?

Before You Read

- **Build background** Say *A trick is an action that surprises or confuses someone. A leaf insect tricks its predators.* Ask *What other animals use tricks?* (some butterflies, leafy sea dragons) Say *We're going to read a story about a man who tricks a tiger.*
- **Introduce the strategy** Say *We'll read about causes and effects. A cause tells why something happens. A cause happens first. An effect is something that happens after the cause.* Give an example from the unit. Say *Some frogs have stripes. The stripes tell predators that the frog is poisonous. The predators don't eat the frog.* Identify the cause and effect. Say *Predators don't eat the frog. This is an effect. What causes this effect?* (The stripes make predators think the frog is poisonous.)
- Say *As we read, let's use a T-chart to organize causes and effects.* Draw a T-chart on the board with the headings **Cause** and **Effect**.

While You Read

- Stop after every few pages to ask questions to help students think about causes and effects. For each answer students give, ask *Is this a cause? Is this an effect?* Add their responses to the chart.

p. 3: *Why is it difficult for Tiger to catch his prey?* (Animals see his bright orange fur.) (Effect: Tiger can't catch his prey. Cause: Animals see his bright fur.)

p. 10: *What does the rope do to Tiger's fur?* (It gives him stripes.) (Cause: Tiger is tied with rope. Effect: The rope gives him stripes.)

p. 11: *Why does Tiger love his stripes?* (They make him hard to see.) (Cause: Tiger is hard to see. Effect: He loves his stripes.)

After You Read

- Read aloud an effect from the story. Have students identify the cause. Ask pairs of students to identify other causes and effects.

Be the Expert

Reading Strategy

Identify Cause and Effect

Identifying cause-and-effect relationships helps students understand why certain events happen in a text. Help students identify cause-and-effect relationships by looking for words that signal cause and effect, such as *because, why, cause, and so.*

Text Background

How Tiger Got His Stripes is a folktale from Vietnam, a country in Southeast Asia. If possible, show students Vietnam on a world map.

Much of Vietnam's topography includes dense forests, but the rich soil near the Red River is used for farming. Water buffalo, which were first trained to help farmers thousands of years ago, are still used by some Vietnamese farmers to plow fields.

While Vietnam once had a large tiger population, today there are very few tigers left due to illegal hunting and destruction of their habitat. Many people are now working to protect tigers in Vietnam so that the tigers do not become extinct.

Student Book

TR: B11 Unit 6. 1 Listen and read.

Some animals can change how they look. They know how to look like other animals, or even like a plant! These copycats are trying to hide from a hungry predator. Sometimes they play tricks on the predator. They try to look like another more dangerous animal or like an animal the predator doesn't like to eat. This cheetah's black spots act as camouflage. This way, the cheetah doesn't scare its prey when it's time to hunt.

This colorful frog has stripes on its skin. The bright colors tell hungry predators that the frog is poisonous. This insect is as green as a leaf. It copies the color and shape of leaves so that predators think it is a leaf. These butterflies are not the same species, but they look like each other. The top one tastes bad. The other one copies its shape and colors. It tastes bad, too!

TR: B12 2 Listen and repeat.

- a predator Do all predators hunt at night?
- a spot Cheetahs have black spots.
- camouflage Do all animals in the rain forest use camouflage?
- prey Some animals use their claws to catch prey.
- hunt How do lion cubs learn to hunt?
- a stripe The tiger has stripes.
- poisonous Some frogs are poisonous.
- an insect I want to study insects.
- species How many species are there on Earth?
- copy Some animals copy characteristics of other animals.

TR: B13 Grammar

That insect is **as green as** a leaf.
Some frogs are **as dangerous as** snakes.
This butterfly is **not as pretty as** the blue one.

TR: B14 5 Listen and repeat. Then read and write.

- hide The insect hides by looking like a leaf.
- attack A strong animal attacks a weak animal.
- defend The weak animal tries to defend itself.
- escape The deer escapes by running away.

TR: B15 6 Listen. Stick True or False. Work with a partner. Compare your answers.

1. The insect is the same color as the leaf. It's hiding.
2. Be careful of sharks. They are dangerous predators.
3. A cat uses its sharp claws to defend itself against a big dog.
4. Other animals, such as deer and rabbits, use camouflage to escape predators.

TR: B16 Grammar

- Lightning **is** dangerous, **isn't it**?
- That frog **wasn't** poisonous, **was it**?
- Sharks **are** scary, **aren't they**?
- The boy **escaped** the dog, **didn't he**?
- This insect **looks** like a stick, **doesn't it**?
- The dogs **were** loud, **weren't they**?
- Your friends **don't** eat meat, **do they**?
- The cats **weren't** friendly, **were they**?

TR: B17 8 Play a game. Cut out the question tags on page 107. Choose nine and glue them to the grid. Then listen. If you have the tag, draw an X on the square.

- Jaguars have dots, _____?
- Lions don't have stripes, _____?
- The deer escaped, _____?
- That insect looks like a leaf, _____?
- That snake is poisonous, _____?
- Those butterflies are beautiful, _____?
- The jaguar didn't catch the deer, _____?
- Your pet frogs weren't poisonous, _____?
- An elephant doesn't use camouflage, _____?

TR: B18 9 Listen, read, and sing.

Note: Lyrics for the song *It's a Wild World* are on Student Book p. 95.

TR: B19 10 The Sounds of English /z/ *crazy* Listen and say the words. Pay attention to the sound of the underlined letter in each word.

1. zoo; zebra
2. amazing; poisonous
3. isn't it; wasn't it

TR: B20 11 Listen and read.

Note: Text for the Reading *The Copycat Dragon* is on Student Book p. 66.

Workbook

TR: 29 Unit 6. 4 Listen for the puzzle words.

Write the matching words under the photos.

- Girl: Let's play a game!
- Boy: OK. How does it work?
- G: I say a word from the puzzle in Activity 1, and then you use it in a sentence with another puzzle word.
- B: I think I can do that. I can match the two words in a sentence.
- G: Sure you can. Here goes! I'm thinking of *stripes*.
- B: *Stripes*? OK. I saw a *predator* that had *stripes*.
- G: A *predator*? Like a tiger? Yes, that works. Now your turn.
- B: OK. I'm thinking of the word *poisonous*.
- G: *Poisonous*? OK. Some species of animals are *poisonous*.
- B: Right! Some spider *species* are *poisonous*.
- G: My turn. I'm thinking of the word *spots*.
- B: OK. Some butterflies have *spots*.
- G: Yes, that's right!
- B: My turn. I'm thinking of the word *prey*.
- G: *Prey*? OK. Rabbits are often *prey* for larger animals.
- B: Rabbits? The poor little things! OK, I'm thinking of the word *camouflage*.
- G: Camouflage? OK. Some insects use plants as *camouflage*.
- B: They do! Some insects are green like plants for *camouflage*. Hey! That was a fun game.

TR: 30 10 Listen and say. Finish the questions.

1. This TV show isn't funny, _____?

2. Animals can disappear in the forest, _____?
3. Gravity pulls objects to the center of the earth, _____?
4. You don't like to take photos, _____?
5. Most hamsters want to escape cats, _____?
6. We won't have a drought, _____?
7. That TV show was funny, _____?
8. Your sister doesn't like to ride a bike, _____?

TR:31 11 Listen again. Check your answers to Activity 10.

1. This TV show isn't funny, is it?
2. Animals can disappear in the forest, can't they?
3. Gravity pulls objects to the center of the earth, doesn't it?
4. You don't like to take photos, do you?
5. Most hamsters want to escape cats, don't they?
6. We won't have a drought, will we?
7. That TV show was funny, wasn't it?
8. Your sister doesn't like to ride a bike, does she?

TR:33 13 Listen and look. Circle the letter or letters that make the same sound as the z in zebra.

zebra; poisonous; use; closet; puzzle; zoo; nose; surprise; cheese; exercise; museum; desert

TR: 34 14 Listen and read.

Note: Text for the Reading *Why Do Mockingbirds Copy?* is on Workbook p. 54.

Answer Key

Student Book

Unit Opener SB p. 58

1. T
2. F
3. Answers will vary.

5 SB p. 63

1. attack
2. hide
3. defend
4. escape

6 SB p. 63

1. True
2. True
3. True
4. False

7 SB p. 64

1. isn't it
2. wasn't it
3. don't they
4. aren't they
5. was it

8 SB p. 64

- don't they, do they, didn't it, doesn't it, isn't it, aren't they, did it, were they, does it

In This Unit

Theme This unit is about music styles and musical instruments.

Content Objective

- Students will
- describe musical styles and instruments used to play them.

Language Objectives

- Students will
- identify musical instruments.
 - discuss musical styles.
 - express preferences.

Vocabulary

Vocabulary 1 *a saxophone, a flute, a guitar, a violin, a drum, beat, a band, practice, a concert, a lead singer, a piano*

Vocabulary 2 *hip-hop, classical, pop, jazz, rock*

Grammar

Grammar 1 use the present perfect with *have/has; ever and never*

Grammar 2 make comparisons with adverbs (*more/less ... than; better/worse than*)

Pacing Guides L5U7

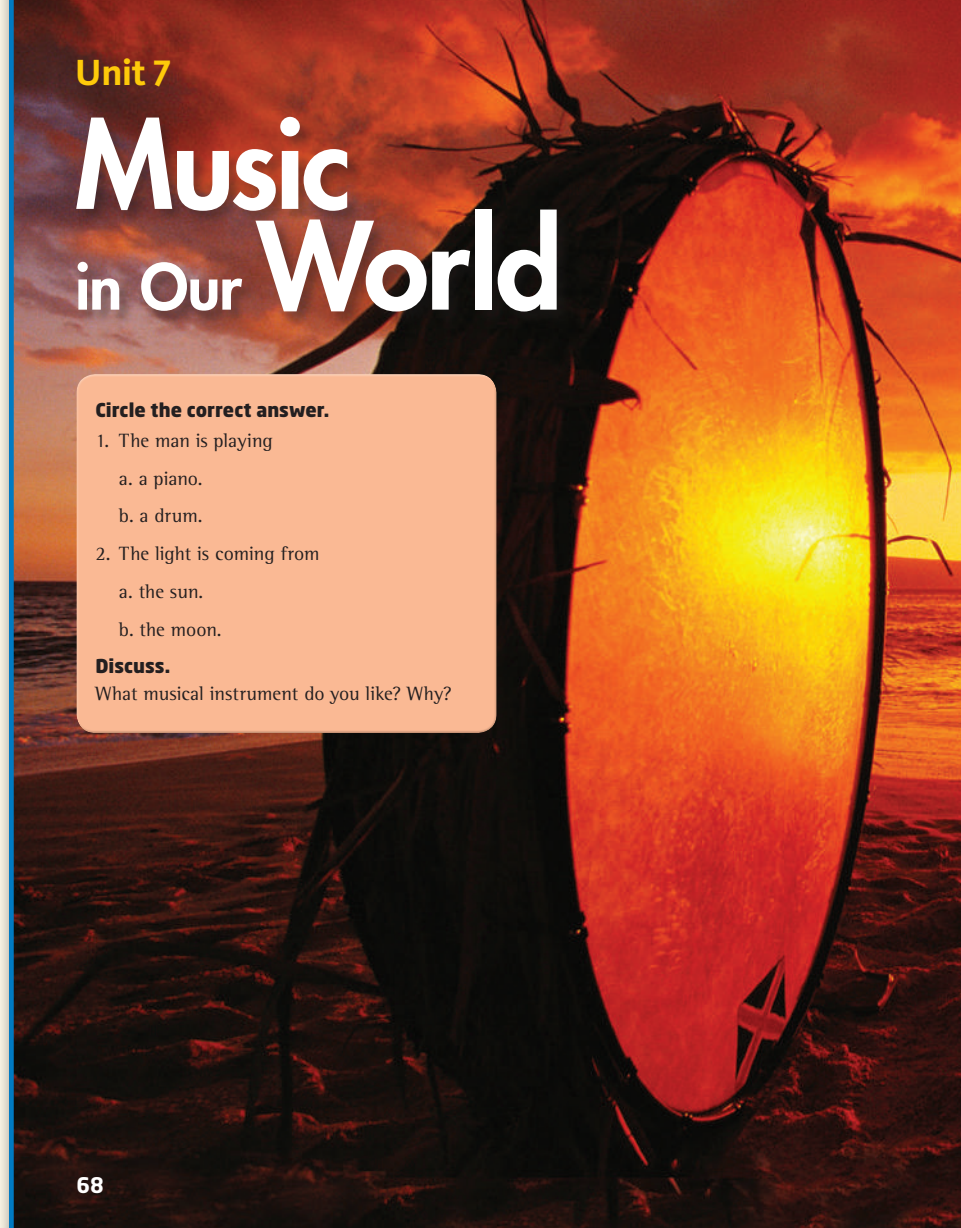
Mission Change through music.

Unit Opener

Objective

- Students will
- discuss a photo.

Resources Video: Introduction; Classroom Presentation Tool: Unit Opener; Teacher's Resource CD-ROM: Home-School Connection Letter; Unit Opener Poster



Unit 7

Music in Our World

Circle the correct answer.

1. The man is playing
 - a. a piano.
 - b. a drum.
2. The light is coming from
 - a. the sun.
 - b. the moon.

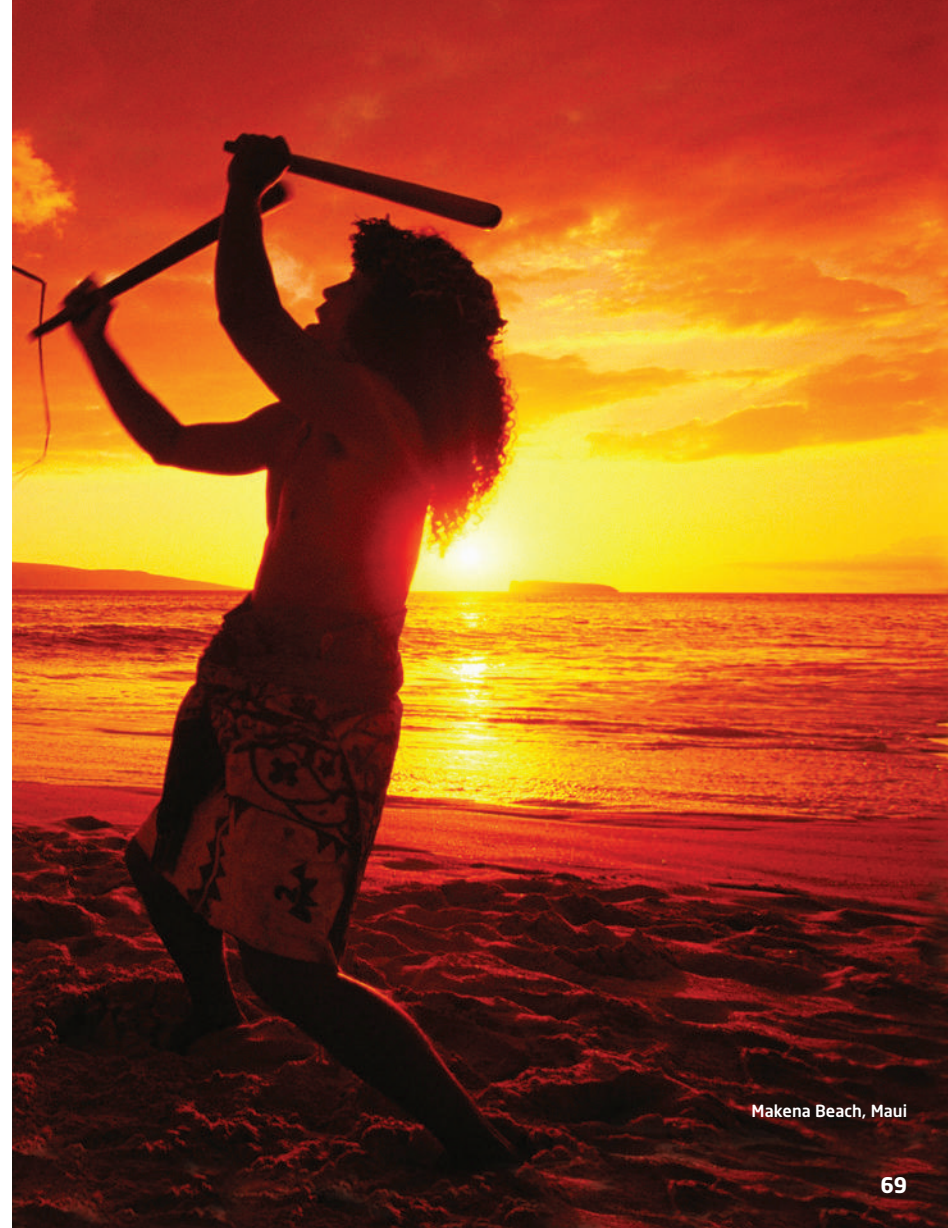
Discuss.

What musical instrument do you like? Why?

68

Introduce

- **Activate prior knowledge** Say *The name of our next unit is "Music in Our World."* Ask *What kinds of music do you know? What kinds do you like? What is your favorite song? How can we make music?*
- Say *We can use instruments to make music.* Act out playing a violin or piano. *We can use our voices to make music, too. We can sing.* Hum or sing one note and point to a group of students to join in. Sing another note and point to a second group of students. Say *Let's add a beat.* Ask another group to tap on their desks. Ask *Can you think of any other ways we can make music? Show me.* Call on one student at a time. Students might tap their feet or make sounds using objects in the room.



Makena Beach, Maui

69

Be the Expert

About the Photo

In this photo, a native Hawaiian man plays a drum on Makena Beach, Maui. Maui is one of a group of islands that make up the U.S. state of Hawaii. The Hawaiian Islands are located in the central Pacific Ocean.



Music, particularly drumming, is an important part of traditional Hawaiian culture. Today, people in Hawaii play drums to perform traditional dances and songs. *Hula* is a native Hawaiian dance that involves chanting and movements that tell a story. The hula was originally created for religious purposes.

Teaching Tip

Classroom Management

Maintain order in the classroom during lively or noisy activities. Develop a clear signal that means *stop* or *quiet*. For example, stand in the front of the room and raise your hand to signal *quiet*. As students quiet down, lower your hand and begin speaking only when your hand is completely lowered. Explain the meaning of this gesture to students beforehand so they can recognize the signal.

- Put students into small groups. Have groups look at the photo on pp. 68–69. Ask questions to encourage discussion of the photo.
 - What do you see in the photo?* (a man standing on a beach holding two sticks)
 - What is the man doing?* (He's hitting a drum with sticks.)
 - When do you think this photo was taken?* (in the evening)
- Read items 1 and 2 aloud. Have students suggest the correct answer for each item. Ask them to provide reasons for their answers. Then confirm the correct answer and discuss each completed sentence.
- Read the Discuss question aloud. Have students respond. Write the instruments they like on the board. Then call on students to tell why they like the instruments. Discuss any common themes.

Objectives

- Students will
- identify and use words related to musical instruments.
 - identify and use words related to playing music.

Vocabulary a saxophone, a flute, a guitar, a violin, a drum, beat, a band, practice, a concert, a lead singer, a piano

Content Vocabulary wind, string, percussion, instruments, shake

Resources Workbook pp. 56–57; Audio CD TR: B21–B22; Video: Vocabulary I; Classroom Presentation Tool: Vocabulary I; Teacher’s Resource CD-ROM: Activity Worksheet 7.1

Related Vocabulary

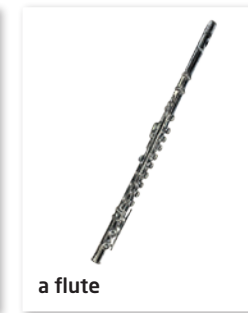
trumpet, cello

1 Listen and read. TR: B21

2 Listen and repeat. TR: B22

There are three main types of musical instrument:

1. Wind instruments - To make music, you blow air through them with your mouth. The **saxophone** and the **flute** are wind instruments.
2. String instruments - They make music when you move the strings. The **guitar** and the **violin** are string instruments.
3. Percussion instruments - You hit or shake them. The **drum** is a percussion instrument. The *thump, thump, thump* of a percussion instrument makes the **beat**.



Would you like to be in a **band**? You have to **practice** hard, but when your band sounds good, you can play for an audience. Invite your friends to the **concert**! If you don't play an instrument but you have a good voice, you could be the **lead singer**!

3 Work with a partner. What did you learn? Ask and answer.

How many types of instrument are there?

There are three main types.



Vocabulary Strategy

Multiple-Meaning Words The musical term *beat* has additional meanings. The verb *to beat* means “to hit repeatedly,” “to mix something in a forceful, or strong, way,” or “to win or be better than someone at something.”

Formative Assessment

Can students

- identify and use words related to musical instruments?
Point to a photo of an instrument students learned about in the lesson. Ask *What is the name of this instrument?*
- identify and use other words related to playing music?
Ask students questions such as *What is the thumping sound a percussion instrument makes when it's played? What do you call a group of people who play instruments together?*

Review For additional practice, direct students to Activity Worksheet 7.1.

Warm Up

- **Preteach** Say *Today we're going to talk about music. We can use our bodies to make music. We can sing.* Hum or sing a few notes. *We can use our hands to tap a beat.* Tap on your desk. *We can use instruments to make music, too.*
- Ask *Does anyone play an instrument? If you do, raise your hand.* Ask *What is the name of the instrument you play?* Write students' responses on the board. If students do not know names, have them act out the instrument they play.

Present

- **Explain** Say *Open your books to pages 70 and 71. Look at the photos. These are musical instruments. People use them to make music.*

- Point to each instrument, act out how to play it, and say its name aloud. Have students repeat each action and word after you.

Practice 1 2

- **1** Say *We're going to read and listen to information about playing music and musical instruments. Read the paragraphs and words on pages 70 and 71 as you listen.* Play **TR: B21**.
- Discuss with the class the paragraphs on pp. 70–71. Ask *What type of instrument do you blow air through with your mouth?* (wind instrument) Ask *How do you make music with a string instrument, like a guitar or a violin?* (you move the strings) Ask *What do you have to do to play an instrument well?* (practice) Tap your desk to make a simple beat. Ask *What are these sounds called?* (a beat)

- **2** Say *Now we're going to hear words, then listen to sentences with those words.* Play **TR: B22**. Have students repeat each word and sentence aloud.

Apply 3

- **3** Put students in pairs. Have two students read the dialogue on p. 71 for the class. Say *Imagine your partner is in a band. You're going to ask him questions about music. Use the new words you learned.* Model with a student. Ask *Who is in your band? What instrument do you play?*
- Give students five minutes to review pp. 70–71 and ask questions. List topics on the board: *kinds of instruments, names of instruments, and concerts.* Add some question words: *Who? What? When? Where? Why? and How?*

Wrap Up

- Say *Let's play a game. One person will think of a musical instrument and give clues about it. We'll try to guess the instrument.* Model the activity. Say *I'm thinking of a wind instrument. It's long and thin. It's silver.* Act out playing the instrument. *What is it?* (a flute) Then call on students to act out and describe instruments for the class to guess.

Objective

- Students will
- use the present perfect with *have/has; ever* and *never*.

Grammar use the present perfect with *have/has; ever* and *never*

Content Vocabulary *opera*

Resources Workbook p. 58; Audio CD TR: B23; Video: Grammar I; Classroom Presentation Tool: Grammar I

Materials spinners, number cards, dice, coins, or other implements for moving around a game board; game pieces

GRAMMAR TR: B23

Have you ever played the piano?	Yes, I have .
Have you ever danced to this music?	No, I haven't .
Has Lisa ever been to a concert?	Yes, she has .
Has she ever heard the saxophone?	No, she has never heard it.

4 **Read.** Complete the sentences. Use *have* or *has*.

1. This song is new. I haven't heard (not / hear) it before.
2. I _____ (never / go) to see an opera. I don't think I'd like it.
3. _____ (listen to) this band? Yes, I have.
4. My dad _____ (never / dance)!

5 **Play a game.** Use the game board on page 109. Play in a small group. Ask and answer.



Practice 4

- Say *When you talk about what you've done, you're talking about something that happened in the past.* Write on the board:

hear → have/has heard	go → have/has gone
listen → have/has listened	dance → have/has danced
ever = at any time	never = not at any time

- Have students refer to the board as they complete Activity 4.
- 4 Read the directions for Activity 4 aloud. Point to item 1 and read the first part. Say *I comes before the blank, so I know I use have, not has.* Point out *have heard* on the board. Say *You'll use these words to fill in the blank.* Then point to *not* in the parentheses. Say *The word not tells me to use a negative word.* Point to *new* in item 1. Say *A new song is a song you haven't heard before. So you would write haven't heard or have not heard on the line.* Explain to students that there is another way to say the same thing. Point to the word *never* on the board. Say *You could also say I have never heard it before.*
- Have students complete items 2–4 individually. Call on students to read their answers aloud. If students need help, review the sentences in the Grammar box.

Apply 5

- 5 Read the directions for Activity 5 and help students find the game board on p. 109. Give students time to look at and read the words and phrases on the game board. Then call on two students to read the model dialogue at the bottom of p. 72.
- Put students into small groups. Make sure they understand the direction they will move: up the left side of the board and down the right. Say *Whoever goes first asks a group member a question. If she answers correctly, then she takes the next turn.*
- Write these sentence frames on the board to guide students as they play: *Have you ever _____? Yes, I have _____. No, I haven't _____. No, I have never _____.*

Wrap Up

- Have students sit in a circle and take turns asking one another questions about things they may have done, for example, *Have you ever played the piano?* or *Have you ever listened to a band?* Continue until everyone has had a turn asking and answering questions.

About the Photo

This photo shows a scene from a Chinese opera. The Peking or Beijing opera of China developed during the mid-1800s. In this form of Chinese theater, actors wear decorative face paint and perform movements and use signals to tell a story. Performances include music, spoken words, songs, and dances. Musicians play a variety of string, wind, and percussion instruments to go along with the performances. Until the late 1900s, only men performed in Chinese operas; now these operas also include women.

Grammar in Depth

The simple past tense and the present perfect tense are both used to discuss the past. The simple past tense should be used when an exact time is specified. For example, *I went to the concert last night.* The present perfect tense is used when the time is indefinite, as in *I have heard that music before.* This action happened in the past, but at an unspecified time.

Warm Up

- **Preteach** Write these words and phrases on the board: *ever = at any time*, *never = not at any time*. Point to the first phrase and say *The word ever means "at any time."* Point to the second phrase and say *The word never means "not at any time."*
- Say *We use ever and never to talk about activities we have and haven't done before.* Tell the class one activity you haven't done before. For example, say *I have never (played the violin).* Then address a student and ask *(Marisol), have you ever (played the violin)?* (yes/no) Say to the class *(Marisol) (has/has never) (played the violin).* Repeat with other activities and students.

Present

- Say *Open your books to page 72. Look at the sentences in the Grammar box.* Play TR: B23.
- **Explain** Point out that the first two questions in the Grammar box begin with *Have you*. Say *We use have with I, you, we, and they.* Then read the last two questions and answers aloud. Point out the word *has* in the sentences. Say *We use has instead of have to talk about another person.*
- Read each question and answer in the Grammar box aloud and have students repeat. Then read each question and have students read the answer.

Objective

- Students will
- identify and use words related to musical styles.

Vocabulary *hip-hop, classical, pop, jazz, rock*

Academic Vocabulary *rank*

Resources Workbook p. 59; Audio CD TR: B24; Video: Vocabulary 2; Classroom Presentation Tool: Vocabulary 2; Teacher's Resource CD-ROM: Activity Worksheet 7.2

Related Vocabulary

rhythm

6 Listen and repeat. Then read and write. TR: B24



hip-hop



classical



rock



pop



jazz

1. A large group of players, with violins, saxophones, and flutes often plays _____ music.
2. Artists don't sing this kind of music. They say the words, instead. It's called _____.
3. A small band with wind instruments, like the trumpet and saxophone, often plays _____.
4. This music is made for many, many people to enjoy. It's easy to listen to. It's _____ music.
5. A type of music with the guitar and a strong beat is _____.

7 Work with a partner. Talk and stick. Rank the types of music. (1 = most favorite) Discuss your favorite music and give examples of songs and performers.

1

2

3

4

5

73

Warm Up

- **Recycle** Say *Let's review some words you learned to talk about music.* Write *band* and *beat* on the board. Say *A band is a group of people that make music together. The members of a band play musical instruments. Some of them may sing, too.* Point to *beat* on the board. Ask *Can you use your hands and desk to make a beat?* Call on one student at a time to make different beats.

Present

- Have students open their books to p. 73. Say *You're going to hear words about musical styles. The word style means the way something is done or performed. Repeat each word and sentence aloud after you hear it.* Play TR: B24.

- **Explain** Say *One musical style is rock. Rock has a strong beat and fast rhythm, or pattern made by the music.* Write *rock* on the board. Say *Show me a strong beat and fast rhythm.* Have students tap on their desks to demonstrate.
- Say *In another musical style, hip-hop, the lead singer speaks the words instead of singing them.* Write *hip-hop* on the board.
- Say *Another musical style is classical. Classical music usually involves people playing string, wind, or percussion instruments.* Act out playing each type of instrument as you say it. Write *classical* on the board.
- Point to the photo for *pop*. Say *Pop music is popular music. Pop is a short way of saying the word popular. It makes you want to sing along.*

- Point to the photo for *jazz*. Say *Jazz music uses many wind instruments. What wind instruments do you know?* (saxophone, flute)

Practice 6

- Ask questions such as the following about the photos on p. 73:
 - Which photos show a lead singer?* (hip-hop, pop)
 - What type of music are the man and woman playing?* (classical)
 - What type of music is the man blowing on a horn playing?* (jazz)
 - What type of music is the guitar player playing?* (rock)
- **6** Say *Now listen and repeat.* Play TR: B24 a second time for students and have them repeat each target word and sentence.
- Work with students to complete item 1 below the photos on p. 73. Then have students complete items 2–5 on their own. Review answers with the class. ✓ Ask *What kind of music has talking instead of singing?* (hip-hop) If students have difficulty, replay TR: B24 and have students repeat the sentences and point to the photos.

Apply 7

- **7** Pair students. Have partners read the directions for the sticker activity at the bottom of the page. Explain that *rank* means to put things in a particular order. Say *What type of music does each sticker show? Put the stickers in order, or rank them, from your favorite music to your least favorite music. Begin with your favorite in Box 1. Talk with your partner about your favorite types of music.*
- Have pairs complete the activity.

Wrap Up

- Say *Let's find out what the class's favorite type of music is.* Write the five vocabulary words on the board. Say *Raise your hand if you like hip-hop best.* Count and write the number on the board. Repeat for the other words. Discuss the results as a class.

Our World in Context

In the early 20th century, jazz developed from Afro-American folk music in the American South. Both West African and European musical traditions influenced jazz's style and sound. The city of New Orleans, Louisiana, is considered the birthplace of this musical style.

Teaching Tip

As students learn new vocabulary words, encourage them to incorporate the words into conversations about familiar topics. When students can relate the words they learn to their own lives, they are more likely to remember the words and use them in everyday speech.

Formative Assessment

- Can students
- identify and use words related to musical styles?
- Ask *What types of music have you heard? Can you name any groups who play these types of music, or examples of songs in these styles?*

Review For additional practice, direct students to Activity Worksheet 7.2.

Objective

Students will

- make comparisons with adverbs (*more/less ... than; better/worse than*)

Grammar make comparisons with adverbs (*more/less ... than; better/worse than*)

Academic Language *compare, comparison*

Resources Workbook p. 60; Audio CD TR: B25; Video: Grammar 2; Classroom Presentation Tool: Grammar 2; Teacher's Resource CD-ROM: Activity Worksheet 7.3

Materials paper clips; pencils

GRAMMAR TR: B25

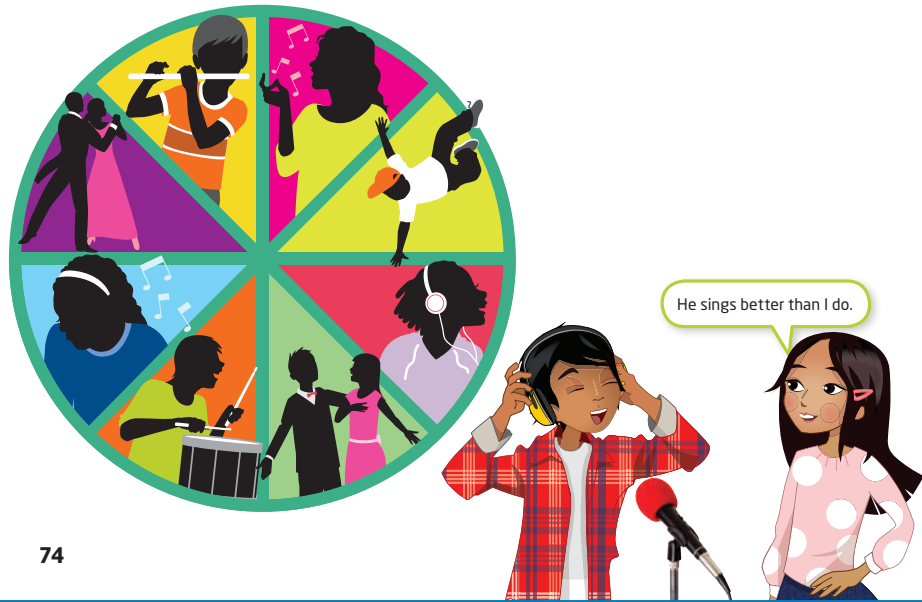
He sings **more loudly than** I do.
I play the guitar **more often than** my brother.
She rides her bike **more carefully** these days.

She plays the violin **better than** he does.
He practices piano **less often than** I do.
They sing **worse than** they used to!

- 8 Work with a partner.** Make comparisons. Ask and answer. Take turns.

1. Name two singers. Who sings more beautifully? Who sings more loudly?
2. Name two athletes. Who runs faster? Who wins more often?
3. Name two relatives. Who works or studies harder? Who speaks more quietly?
4. Name two types of music. Which type do you dance to better? Which do you listen to more often?

- 9 Play a game.** Play with a partner. Take turns. Spin and make sentences.



74

Warm Up

- **Set the stage** Say *Ana and Teresa do many of the same things. They both like to sing. Teresa sings like this. Sing a note loudly. Ana sings like this. Sing a note very quietly. Say and write on the board Teresa sings more loudly than Ana does.*
- Say *Ana and Teresa both like to dance, too. Ana has danced since she was very young. Teresa takes dance lessons every week. Say and write on the board Teresa dances as well as Ana does.*
- Say *Ana and Teresa also take piano lessons together. Act out playing the piano. Say Ana practices the piano every day. Teresa only practices a few times a week. Say and write on the board Teresa practices less often than Ana does.*

Present

- Draw students' attention to the Grammar box on p. 74. Play **TR: B25**. Have students repeat each sentence. Have students circle the words *more than, better than, less than, and worse than*. Say *You can use these words to compare people or things. When you compare, you think about what is the same and what is different.*
- **Give examples** Say, for example, *I practice the guitar every day. My brother practices once a week. My brother practices less often than I do. I practice more often than he does.* Repeat with other sentences, such as *I don't know how to play the drums. Can you play the drums better than I can? (Micaela) can play the drums better than I can.*

Grammar in Depth

Both adjectives and adverbs can be used to make comparisons. However, adjectives and adverbs sometimes form comparisons in different ways. To make a comparison with an adjective such as *quiet*, *-er* is added. (My car is quieter than yours.) To make comparisons with adverbs that end in *-ly*, the word *more* is used. (My car runs more quietly than yours does.)

Practice 8

- **8** Say *Now it's your turn to make sentences with comparisons.* Read the directions for Activity 8 and item 1 aloud. Call on a student to model the first dialogue with you. Have the student direct the first sentence to you. Respond (*Katy Perry*) and (*Adele*). Then have him ask you the next question. Say (*Adele*) *sings more beautifully than (Katy Perry)*. He then asks you the final question. Say (*Katy Perry*) *sings more loudly than (Adele)*. *Now switch roles with the student and repeat the dialogue. Make sure he knows he can compare other singers.*
- Have partners complete the speaking activity. If students have difficulty, review the sentences in the Grammar box. When they have finished, call on several pairs to model one of their dialogues for the class.

Apply 9

- **9** Assign partners. Say *Take turns spinning the spinner. When it stops, look at the picture. Make a sentence with a comparison about the picture.* Read the model sentence aloud. Explain to students that if the girl also sings well she could say *He sings as well as I do*. Write the sentence on the board and underline *as* and *as*. Then give other examples of sentences with the phrase, such as *You sing as loudly as I do. My sister plays soccer as well as he does. He dances as fast as my brother does.*
- Model how to play the game. Spin, then model a sample sentence. For example, if the paper clip stops on the picture of the boy playing the flute, say *Enrique plays the flute as well as I do*.
- Have pairs play the game. ✓ Say *I play music softly. My friend plays music very loudly.* Have students complete the sentence frame *Your friend plays music _____ you do.*

Wrap Up

- Write these phrases on the board: *more/less often than, faster/slower than, harder/easier than, better/worse than, and as well as*. Have students stand in a circle. Call on a student to give an activity (play the piano). Have the next student make a comparison with that activity (*I play the piano more slowly than my sister*). Continue around the circle, helping students as necessary.

Formative Assessment

Can students

- make comparisons with adverbs (*more/less ... than; better/worse than*)? Ask students to name activities they and their family members do at home. Then have students choose two of the activities and write a complete sentence using *more/less than* and *better/worse than* to make comparisons.

Review For additional practice, direct students to Activity Worksheet 7.3.

Song - The Sounds of English

Song

Vocabulary

Vocabulary 1 a drum, a saxophone, beat, a flute, a piano, a guitar, a band

Vocabulary 2 hip-hop

Grammar

Grammar 1 use the present perfect with *have/has*; *ever* and *never*

Resources Workbook p. 61; Audio CD TR: B26; Video: Song; Classroom Presentation Tool: Song; Teacher's Resource CD-ROM: Activity Worksheet 7.4

Related Vocabulary

melody, rhythm, note, chord

The Sounds of English

Resources Workbook p. 61; Audio CD TR: B27; Classroom Presentation Tool: The Sounds of English; Picture Cards 22, 41, 105, 210, 228, 391, 478; The Sounds of English Card 34

10 Listen, read, and sing. TR: B26

Music Is Fun

*Have you ever listened to hip-hop?
Have you ever listened to drums?
I listen to all kinds of music.
It's amazing fun.*

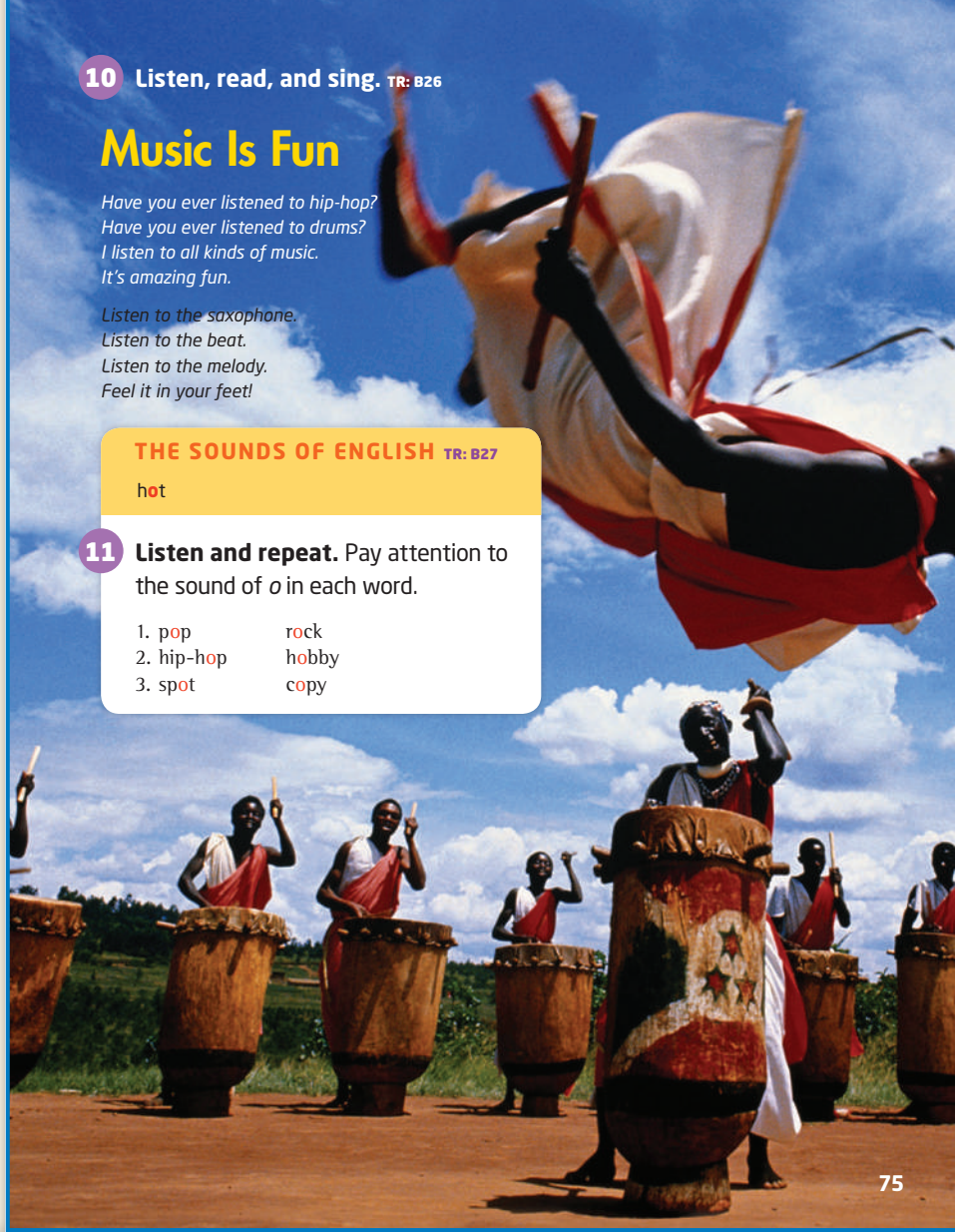
*Listen to the saxophone.
Listen to the beat.
Listen to the melody.
Feel it in your feet!*

THE SOUNDS OF ENGLISH TR: B27

hot

11 Listen and repeat. Pay attention to the sound of o in each word.

- | | |
|------------|-------|
| 1. pop | rock |
| 2. hip-hop | hobby |
| 3. spot | copy |



75

Use the Song 10

- **Act it out** Say *We've talked about music. What kind of musical instruments can we play? Let's review the names.* Have students look at pp. 70–71 and read the name of each instrument aloud. Ask *Which instrument do you want to play in the band? Show me.* Have students act out playing the guitar, saxophone, violin, piano, flute, or drum.
- Have students turn to p. 75. Ask *What instrument are the men in the photo playing?* (drum) Remind students that drums play an important part in the traditional music of many cultures.
- Point out the title of the song. Say *Music is fun! It makes us want to dance or sing. Some music makes you want to move. Some music makes you want to be quiet and just listen.*
- **10** Play the first eight lines of the song (TR: B26) once as students listen and follow along in their books. Ask students to name the vocabulary words in this part of the song. (*hip-hop, drums, saxophone, beat*) Then ask them to name some of the instruments they heard. Play the first eight lines again as students sing along.
- Have students turn to p. 96 and scan the complete song lyrics. Then Play "Music Is Fun" all the way through as students read and sing along.
- Have students stand up. Play TR: B26 again. Tell students to listen for an instrument they would like to play. When they hear the sounds of that instrument in the song, students should act out playing it (drum, saxophone, flute, piano, guitar).

Extend

- Have students turn to p. 75. Play or sing the first four lines of *Music Is Fun*. Have students point to the vocabulary word in the first line of the song (*hip-hop*). Say *Hip-hop is a type of music. What are other types of music?* Then put students into pairs and assign each pair one of the other four types of music. Say *Write a new verse for Music Is Fun. Your verse should include the type of music I gave you.* Call on pairs to read or sing their new verse for the class.
- Write the following question frame on the board: *Have you ever _____?* Say *Listen for questions with Have you ever? in the song.* Play the first four lines of *Music Is Fun* and tell students to name the two different activities mentioned in the questions. (listened to hip-hop, listened to drums) Then have students think of other music-related activities that could complete the question frame on the board. Call on students to ask and answer the questions.

The Sounds of English: /ɒ/ as in hot 11

- **11** Display a picture of a rock or Picture Card 41. Ask *What's this?* Say *That's right. It's a rock.* Draw a small lizard on a big rock with the sun shining down on it. Then write this sentence on the board: *A lizard sits on the top of a rock when it's hot.* Say the sentence and have the class repeat it as you underline *top*, *rock*, and *hot*. Say the sentence aloud again, circling the o in each of the underlined words and emphasizing the /ɒ/ sound in each word.
- Say *Now let's listen to other words that have the same /ɒ/ sound you hear in hot.* Play TR: B27 once while students listen. Then say *Let's listen again and repeat the words.* Tell students to pay attention to the sound of o in each word. Play TR: B27 again and have students repeat the words.
- To check understanding, display the Picture Cards for *clock, rock, top, hot, soccer, helicopter, and costume*, as well as some cards for words that do not include the target sound.
- Hold up a card or picture, say the word, and have students raise their hands if they hear the target sound. Say *Look and listen. Raise your hand if you hear /ɒ/ as in hot.* If students raise their hands in error, repeat the incorrect word and a word with the target sound to demonstrate the contrast.

Be the Expert

About the Photo

In this photo, Burundi drummers perform during a tribal ceremony in the village of Ninga. The Republic of Burundi is located in east-central Africa, directly south of the Equator. The country has a strongly artistic culture and is known throughout the world for its folk dancing. A yearly festival in Burundi features traditional dances and drummers playing the Karyenda ("sacred drum").

Teaching Tip

Help students focus on lesson content when they sing songs and participate in other activities involving music. Monitor students as they sing to ensure that they pronounce words correctly and don't skip words. Remind them to sing rather than shout.

The Sounds of English Cards

You can use The Sounds of English Card 34 to teach the /ɒ/ sound. The card and corresponding audio are available on the *Explore Our World* website.

Objectives

- Students will
 - talk about sound.
 - rank the volume in decibels of different sounds.
 - locate information in an infographic.

Reading Strategy Ask Questions

Content Vocabulary *volume, sound waves, hertz, range, decibels, output*

Resources Workbook pp. 62–63; Audio CD TR: B28; Classroom Presentation Tool: Reading

Materials note cards

Related Vocabulary

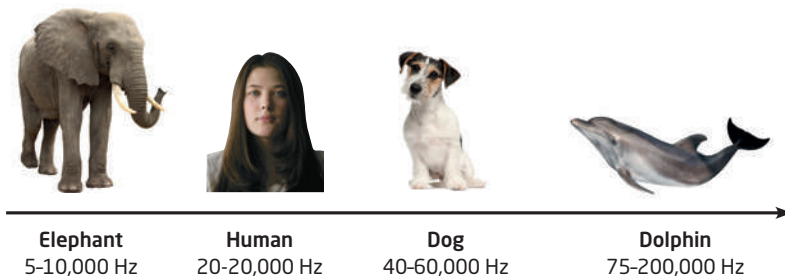
headphones

12 Listen and read. TR: B28

Listen to This!

“Hey, turn that music down!”
Do you ever wonder why your parents tell you to turn the volume down when you’re listening to loud music? It’s not because they don’t like the type of music. (Well, hip-hop *might* not be their favorite music!) It’s important to listen to music and other sounds at the right volume because if you don’t, it can hurt your ears! Did you know that sound travels in waves? Sometimes, a sound is too high or too low for people to hear, depending on how fast or slow the sound waves are moving. The movement of sound can be measured in units called hertz (Hz). The range that humans can hear is 20–20,000 Hz. Dolphins can hear sounds from 75–200,000 Hz! That means they can hear things we can’t.

We measure the volume of a sound in decibels (dB). The sound of people whispering is about 30 dB, the sound of a rock concert is closer to 115 dB, and the sound of a jet engine is about 140 dB! The maximum output of most MP3 players is between 70–90 dB, which is really loud! Try to keep the volume at 50 dB, or a level that allows you to easily hear people around you talking. Your ears will thank you!



13 Role-play. Imagine you have a younger brother or sister who is listening to very loud music. Tell him or her to turn down the sound and explain why very loud music is not good.

Warm Up

- **Set the stage** Say *I love to listen to music. Sometimes, I turn up the sound really loud. But I don’t do that very often because I know it’s not good for my ears.*
- Say *It’s not just loud music that can hurt your ears.* Ask *What other loud sounds do you think might be harmful to your ears?* Explain that loud machines, such as lawn mowers and jet airplanes, can damage hearing over a long period of time.

Present 12

- **12** Write *volume* on the board. Say *When you turn the sound on a TV, MP3 player, or radio up or down, you are controlling the volume, or the loudness or softness, of the sound.*

- Have students turn to p. 76. Point out the photo of the girl on the bed. Say *The girl is listening to music through headphones and dancing on her bed.* Ask *What type of music do you think she’s listening to? Do you think the volume of the music she’s listening to is loud or soft? Then say Today we’ll read about the science of sound and find out how loud is too loud!*
- Play **TR: B28** and have students read along. Encourage students to ask themselves questions as they read to make sure they understand the text. There will be time later on to discuss their questions.

Practice

- Play **TR: B28** a second time. Pause at the end of each paragraph to check for comprehension. Ask questions such as:

Paragraphs 1–2: *What is the main reason why you shouldn’t listen to loud sounds?*

Paragraph 3: *How does sound travel? What is the name of the units that measure the movement of sound? Why can’t humans hear some sounds?*

Paragraph 4: *Fill in the blank: The volume of a sound is measured in _____. What’s one way to know that you have the volume too high?*

- **Graphic literacy** Point out the infographic at the bottom of p. 76. Say *This shows the range, or set, of sound waves that humans and certain animals can hear. The range of the movement of sound is measured in hertz.* Point to the girl and explain that she represents all humans. Say *Humans are able to hear sounds in the range of 20 to 20,000 hertz.*
- Give students a minute to look at the infographic. Ask *What does the infographic show?* (the range of sound waves that humans and some animals can hear) *What range can dolphins hear?* (75–200,000 Hz) *Who can hear more sounds, humans or dolphins?* (dolphins)
- Take a few minutes to ask students if they asked themselves any questions as they read “Listen to This!” Then clarify or explain any words or concepts students may need help understanding. Ask *What range of sound waves can humans hear?* (20–20,000 Hz) If necessary, play **TR: B28** again.

Apply 13

- Call on a student to read aloud the directions for Activity 13. Give each student a note card. Say *Use what you’ve learned to convince your younger (sister) to turn down the volume!* Give students enough time to think about the topic, review the Reading, and make some notes to help them play the part of the older brother or sister.
- Put students in pairs. Then read the activity directions aloud again. Designate one student to play the older brother or sister and the other student the younger one. Have them begin. Encourage students to use gestures and dialogue to liven up their role-play. When pairs have finished, have them switch parts and role-play again.

Wrap Up

- Say *You read about different musical instruments and different types of music. Choose an instrument or type of music you like and tell me something about it.* Have students answer using sentences and target vocabulary. If they need help, give them these sentence frames: *I like _____.* *You play it _____.* *I like _____ music best because _____.*

Our World in Context

Wolfgang Amadeus Mozart was an Austrian composer. Mozart composed in many musical styles, and produced many musical works during his short life, including about 22 operas and 41 symphonies. His talent for writing music was clear at a very early age: Mozart composed his first song at the age of four!

Reading Strategy

Ask Questions When readers ask questions about a text, they improve their reading comprehension skills. Encourage students to ask questions about a text before, during, and after reading.

Students can ask questions before reading to set a purpose for reading and focus on what they want to learn. Asking questions during reading can help students monitor their understanding. Asking questions after reading allows students to consider the text as a whole.

Formative Assessment

- Can students
- talk about sound?
Ask Why is it important to listen to sounds at the right volume? How does sound travel? What are the units that sound waves are measured in?
 - understand how sound volume is measured?
Have students rank the number of decibels of the sounds of whispering, an MP3 player, a jet engine, and a rock concert from lowest to highest.
 - locate information in an infographic?
Draw students’ attention to the infographic on p. 76. Ask questions such as *Can an elephant hear more sounds than a dog? Which animal can hear the greatest range of sounds?*

Mission

Mission Change through music.

Objective

- Students will
- share ideas

Content Vocabulary *inspire*

Resources Video: Meet the Explorer: Jack Johnson; Mission Poster

Be the Expert

Meet the Explorer

Jack Johnson is an internationally known musician and filmmaker. He works hard to educate people about the environment and puts on eco-friendly concert tours.

Johnson grew up surfing and playing guitar in Hawaii. In 2003, he and his wife created the Kokua Hawaii Foundation and Kokua Festival to support environmental education in Hawaii's schools and communities. In 2008, Johnson donated 100 percent of his tour profits to set up the Johnson Ohana Charitable Foundation, an organization that supports environmental, art, and music education worldwide.

In 2011, Johnson received National Geographic's Arts Ambassador for the Environment Award. This award is given to an entertainer who has shown leadership in making people aware of environmental and cultural conservation issues and inspiring people to take care of the planet.

Change through music.

Has a song ever made you feel differently about something? How did the song change you?

NATIONAL GEOGRAPHIC Jack Johnson
National Geographic Arts Ambassador for the Environment

"Music can change the world. It can inspire people to care, to do something positive, to make a difference."

77

Mission

- Read aloud the sentence at the top of p. 77. Have students repeat it. Say *What do you think? Can music make people or things change?*
- Say *People all around the world enjoy music. Some people also use music to make the world a better place.* Point out the term *inspire* in the quote from Jack Johnson. Say *When you inspire people, you make them want to do or create something good.*
- Call on a student to read the caption in the middle of the page. Encourage a discussion of how music can make a positive difference in the world with questions such as:
What kind of music makes you want to do something good?
What does it make you want to do?
How can musicians make people care about the world?
- Write students' ideas on the board. When the discussion is ended, call on students to say what they think are the best ideas for bringing about change through music.

Give the Unit Quiz

- Hand out the Unit 7 Quiz. Have students scan the pages. Say *Look at the directions, examples, questions, and pictures. Think about what you know and what you've learned.*
- Give students two or three minutes to preview the test.
- **Listening instructions, Section 1** Point to the pictures on p. 73. Say *Look at the pictures.* Point to the letters. *There is a letter next to each picture. The letter G is for the pictures A–E all together. Write the letter that matches the sentence you hear.*
- Say *Now listen to an example.* Play **TR: AB40.** (Our band plays these instruments). When students have written a letter, ask *What letter did you write?* When students respond with the letter G, begin the quiz. Say *Let's begin.* Play the rest of **TR: AB40.**
- When students have completed Section 1, have them put down their pencils. Say *Now you're going to read and write.* Read the directions for Section 2 aloud. Ask *What do you have to do?* (Complete the sentences. Use *have* or *has* and the correct forms of the words in parentheses.) Repeat the process for Sections 3 and 4. (3: Complete the sentences. Use words from the box. 4: Read. Circle *True* or *False*.)
- Have students complete Sections 2–4 independently.
- **Listening instructions, Section 5** Read the directions aloud. Ask *What do you have to do?* (Listen. Read. Answer the questions.)
- Say *Now listen to an example.* Play **TR: AB41,** pausing after (Has Maya ever been in a band?) When students have written their answers, say *What answer did you write?* Begin the quiz when students respond with *No, she hasn't.* Say *Let's begin.* Play the rest of **TR: AB41.**
- **Speaking instructions** Point to the image at the top of p. 87. Say *Look at the picture. Answer my questions. Use complete sentences. Now listen to an example.* Ask *What is this?* Point to the musicians and singer. Say *It's a band.*
- See p. 91 of the Assessment Book for questions and expected student responses.

Assessment

Resources Assessment Book pp. 73–74, 87, 91, 95, 98; Assessment Audio CD TR: AB40, AB41

Be the Expert

Testing Tip

Review your answers. Teach students to take time at the end of testing to review answers and responses. They should look to make sure they did not make any careless mistakes (such as putting the right answer in the wrong place or skipping a question), and then spend the last few minutes going over the most difficult items and tasks.

Assess Unit Objectives

Ask questions such as the following:

- *How do you play a flute?*
- *What do you like better, jazz or hip-hop? Why?*
- *What is classical music?*

Project For a theme-related closing activity, direct students to the Unit 7 Project Worksheet.

Vocabulary 1 *drums, a piano, a saxophone, a flute, a guitar, a violin, a band, practice, a concert, lead singer, a beat*

Vocabulary 2 *classical, hip-hop, jazz, pop, rock*

Grammar 1 use the present perfect with *have/has*; *ever* and *never*

Grammar 2 make comparisons with adverbs (*more/less ... than*; *better/worse than*)

Song *Music Is Fun*

Viewing different styles of music

Meet the Explorer Jack Johnson

Story Time *The Songbirds' Flute*

Resources Student Book pp. 68–74, 77; Teacher's Resource CD-ROM: Graphic Organizers (T-chart)



Zoom In

Vocabulary

- Play any of the vocabulary segments. Pause the video on images in frames. Have students name each. Press *Play* to bring up the full-screen image and caption.

Grammar

- Play Grammar 1 or Grammar 2, pausing the video on each caption. Have students read it and tell how it explains or describes the image.

Song

- Play the chorus of *Music Is Fun* and have students sing along. Write *Have you ever listened to hip-hop?* on the board. Erase *hip-hop* and ask *What other styles of music could we sing about?* (classical, pop, jazz, rock) Write these on the board. Have students sing the line four times, replacing *hip-hop* with each style.

Viewing

- After the viewing segment, say *Name one new thing you learned.* Write responses on the board.
- Play the segment again with the audio off. Have students tell about types of instruments and music.

Meet the Explorer

- Say *Jack Johnson uses music to teach young people about the environment.* Ask *How can people use music to help others in their community?*

Story Time

- View Story Time: *The Songbirds' Flute*.
- View the story segment again. Pause and ask questions such as *What is the big problem in the story?* (The princess is sad.) *What does the king tell all the musicians?* (He will give them gold if their music makes her smile.) *What happens when the young man sings for the princess?* (She smiles.)

Before You Watch

- Play the introduction. Say *This video is all about musical instruments and kinds of music.* Ask *Do you or does someone you know play a musical instrument? Which one?*

While You Watch

- Draw a T-chart on the board with the headings **Musical Instruments** and **Musical Styles**. Read each heading aloud. Say *Make a chart like this. Use it to sort the words you see and hear into these two groups.*
- Ask *What's the name of one musical instrument?* (piano) *What's an example of a musical style?* (rock)
- Pause the video as necessary to allow students to identify and sort words. Call on students to use each word in a sentence describing what they see onscreen.
- Pause the video to ask students questions such as *Have you ever played (the piano)?* Students should respond *Yes, I have.* or *No, I haven't.*

After You Watch

- Put students in pairs and have them read aloud their T-charts to their partners. Then play parts of the video with the audio off. Freeze frames and have pairs use their T-charts to write a sentence about what is happening in the video. Have pairs read their sentences aloud.

The Songbirds' Flute

There was once an unhappy princess. Her father, the king, held a concert. He promised great riches to the musician who could make his daughter smile. One man sang so beautifully that the princess smiled. But he did not want gold. He only wanted the princess's love. Would he win it?



Before You Read

- **Activate prior knowledge** Ask students questions to get them thinking about the main ideas of the story. Ask *Does listening to music make you feel happy?*
- **Introduce the strategy** Say *Today we'll learn about summarizing.* Provide examples to help students understand how to summarize. Say *When you summarize, you tell what a story is about. You include only the most important parts of the story, such as the main events.* Summarize a familiar fairy tale or folktale for students.
- Say *As we read let's take notes on the most important ideas in each part of the story.* Assign partners. Hand out a Storyboard graphic organizer to each pair. On the board, write *First, Second, Third, Fourth, Fifth, and Finally.* Say *Look at the back cover of the reader.* Read the summary aloud. Have students rephrase the summary in their own words.
- Say *As we read, think about the most important thing or things that happen. Write these ideas on the lines of the storyboard.*

While You Read

- Stop after every few pages. Ask questions to help students think about story events to summarize.
 - p. 2: *Who are the main characters in the story so far? What problems do they have?*
 - p. 5: *How does the king try to help his daughter? What makes the princess smile? What does the princess tell the young man?*
 - p. 11: *What does the young man try to do? Who helps him, and how? How does the story end?*

After You Read

- Have pairs combine their notes and write a short summary of the story. Call on students to read their summaries aloud.

Text Type folktale

Reading Strategy Summarize

Vocabulary *a concert, practice, a guitar, a drum, a violin, a flute*

Grammar use present perfect with *have/has*; *ever* and *never*; make comparisons with adverbs (*more/less ... than*; *better/worse than*)

Resources Video: Story Time: *The Songbirds' Flute*; Classroom Presentation Tool: Story Time; Teacher's Resource CD-ROM: Graphic Organizers (Storyboard), World Map Poster

Be the Expert

Our World in Context

The Songbirds' Flute is a folktale from Guatemala, a country in Central America. Central America is located between the continents of North America and South America. Show students Guatemala on the world map.

Reading Strategy

Summarize Summarizing a story helps students check their understanding and helps them remember the most important ideas and events in a story. As students summarize, remind them to use their own words to retell the key ideas.

Text Background

A folktale is a traditional story passed down from one generation to the next through the oral tradition. Folktales include universal or timeless themes. *The Songbird's Flute* shows the importance of music and teaches that love is more important than money.

Student Book

TR: B21 Unit 7. 1 Listen and read.

There are three main types of musical instrument:
1. Wind instruments – To make music, you blow air through them with your mouth. The saxophone and the flute are wind instruments.

2. String instruments – They make music when you move the strings. The guitar and the violin are string instruments.

3. Percussion instruments – You hit or shake them. The drum is a percussion instrument. The thump, thump, thump of a percussion instrument makes the beat.

Would you like to be in a band? You have to practice hard, but when your band sounds good, you can play for an audience. Invite your friends to the concert! If you don't play an instrument but you have a good voice, you could be the lead singer!

a guitar; a saxophone; a violin; a piano; a guitar; a flute; a drum

TR: B22 2 Listen and repeat.

- a guitar I like to play the guitar.
- a saxophone Can you play the saxophone?
- a violin I'm learning to play the violin.
- a piano I'm taking piano lessons.
- a flute I like the sound of the flute.
- a drum I play the drums in a band.
- beat I like the beat of the drum.
- a band We went to see our favorite band.
- practice He practices many hours a day.
- a concert We're going to a concert tonight.
- a lead singer The lead singer has a beautiful voice.

TR: B23 Grammar

Student 1: **Have** you ever played the piano?

Student 2: Yes, I **have**.

S1: **Have** you ever danced to this music?

S2: No, I **haven't**.

S1: **Has** Lisa ever been to a concert?

S2: Yes, she **has**.

S1: **Has** she ever heard the saxophone?

S2: No, she **has never heard** it.

TR: B24 6 Listen and repeat. Then read and write.

- hip-hop I like to sing hip-hop.
- classical I want to go to a classical concert.
- pop What's your favorite pop band?
- jazz I like the sound of the saxophone in jazz songs.
- rock I went to a rock concert last weekend.

TR: B25 Grammar

- He sings **more loudly than** I do.
- She plays the violin **better than** he does.
- I play the guitar **more often than** my brother.
- He practices piano **less often than** I do.
- She rides her bike **more carefully** these days.
- They sing **worse than** they used to!

TR: B26 10 Listen, read, and sing.

Note: Lyrics for the song *Music Is Fun* are on Student Book p. 96.

TR: B27 11 The Sounds of English /b/ hot

Listen and repeat. Pay attention to the sound of o in each word.

- 1. pop; rock 2. hip-hop; hobby 3. spot; copy

TR: B28 12 Listen and read.

Listen to This!

"Hey, turn that music down!"
Do you ever wonder why your parents tell you to turn the volume down when you're listening to loud music? It's not because they don't like the type of music. (Well, hip-hop *might* not be their favorite music!) It's important to listen to music and other sounds at the right volume because if you don't, it can hurt your ears! Did you know that sound travels in waves? Sometimes, a sound is too high or too low for people to hear, depending on how fast or slow the sound waves are moving. The movement of sound can be measured in units called hertz (Hz). The range that humans can hear is 20–20,000 Hz. Dolphins can hear sounds from 75–200,000 Hz! That means they can hear things we can't. We measure the volume of a sound in decibels (dB). The sound of people whispering is about 30 dB, the sound of a rock concert is closer to 115 dB, and the

sound of a jet engine is about 140 dB! The maximum output of most MP3 players is between 70–90 dB, which is really loud! Try to keep the volume at 50 dB, or a level that allows you to easily hear people around you talking. Your ears will thank you!

Workbook

TR: 35 Unit 7. 1 Look and listen. Write the words that you hear.

1. You should practice playing the flute. You can be a good flute player if you practice.
2. Haruto plays in a band with his friends.
3. Miyu likes to play violin in a concert. You can go to her concert to hear Miyu play violin.
4. The beat of the music comes from the drum. Hit the drum to make the beat.
5. Hina plays the piano very well. Everything she plays on the piano is excellent.
6. I like the music he makes on his saxophone. The sound of the saxophone is very cool!
7. I like listening to that lead singer. That lead singer will sing my favorite song next.
8. Haruto plays the guitar. The guitar is his favorite instrument!

TR: 36 8 Listen. Number the music styles in the order you hear them.

1. a recording of pop music 2. a recording of hip-hop music 3. a recording of classical music 4. a recording of rock music 5. a recording of jazz music

TR: 37 11 Listen to the song. Answer the questions.

Answer Key

Student Book

Unit Opener SB p. 68

- 1. b 2. a

4 SB p. 72

- 1. haven't heard/have never heard 2. have never gone 3. Have you ever listened to 4. has never danced

Note: Lyrics for the song *Music Is Fun* are on Student Book p. 96.

TR: 38 13 Listen. Write the missing letters. Then think of more words that have the same sound of o that you hear in concert.

- 1. concert 2. pop 3. rock 4. spots 5. copy

TR: 39 14 Listen and read.

It's All Music

The oldest instrument ever found is more than 35,000 years old! It's a flute. Instruments of this type are called wind instruments because the music comes from moving air. Each instrument has a shape that makes its sound different. Some wind instruments have holes for fingers. Others have buttons to press. Holes and buttons let you change the way the air travels.

Another way to make music is with strings. When you slide a finger over a string or pluck it, it makes music. Thick, thin, long, and short strings all make different notes. Musicians use a bow to play some string instruments. The bow is a piece of wood with hairs or a string stretched between its ends.

You can also make music by hitting or shaking something that makes a sound. Percussion instruments can be made from many things. That's because most things make a sound when you hit them. A drum is a percussion instrument. A piano is a percussion instrument, too. When piano keys are pressed, hammers inside the piano hit the strings to make music.

6 SB p. 73

- 1. classical 2. hip-hop 3. jazz 4. pop 5. rock

Workbook

Go to pp. 218–219 for the Workbook Answer Key for this unit.

In This Unit

Theme This unit is about the universe and space exploration.

Content Objectives

- Students will
- describe space exploration.
 - discuss whether there is life in space.

Language Objectives

- Students will
- talk about what makes up a solar system, a galaxy, and the universe.
 - discuss life in space.
 - discuss space exploration.

Vocabulary

Vocabulary 1 a planet, orbit, a solar system, a galaxy, the universe, a comet, a journey, search, space, an extraterrestrial

Vocabulary 2 a rocket, a spacecraft, an astronaut, a space station, communicate

Grammar

Grammar 1 speculate with *may* and *might*

Grammar 2 use indefinite pronouns (*everyone, someone, anyone, no one*)

Pacing Guides L5U8

Mission Live curious.

Unit Opener

Objective

- Students will
- analyze a photo.

Resources Video: Introduction; Classroom Presentation Tool: Unit Opener; Teacher's Resource CD-ROM: Home-School Connection Letter; Unit Opener Poster; World Map Poster

Materials colored pencils or markers

Unit 8

Life Out There

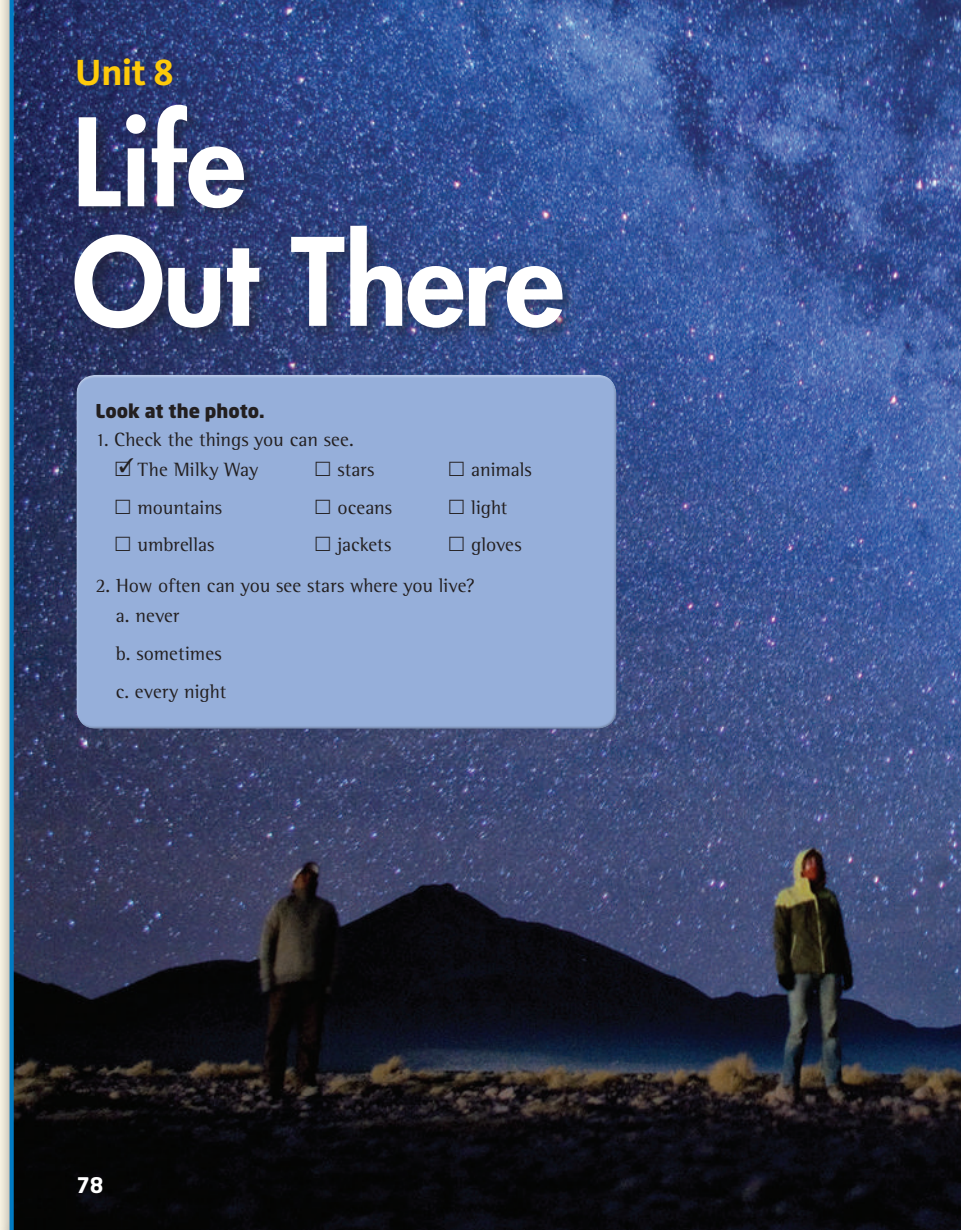
Look at the photo.

1. Check the things you can see.

- | | | |
|---|----------------------------------|----------------------------------|
| <input checked="" type="checkbox"/> The Milky Way | <input type="checkbox"/> stars | <input type="checkbox"/> animals |
| <input type="checkbox"/> mountains | <input type="checkbox"/> oceans | <input type="checkbox"/> light |
| <input type="checkbox"/> umbrellas | <input type="checkbox"/> jackets | <input type="checkbox"/> gloves |

2. How often can you see stars where you live?

- never
- sometimes
- every night



78

Introduce

- **Build background** Say *The name of our next unit is "Life Out There."* Say *When something has life, we say it is alive.* Point to a student. Ask *Is (Lia) alive?* (yes) Then hold up something that is not alive, such as a book or a pen, and ask *Is this alive?* (no) Ask *How do we know that something is alive?* (It eats, it drinks, it moves, it grows.)
- Have students look at the photo on pp. 78–79. Say *These people are on Earth. They're looking at the stars, very far away. Do you think there are things that are alive out there?* Ask *If there's life out there, what do you think it looks like? Do the living things look like us? Are there animals that look like the animals on Earth?* Give out drawing materials and ask students to draw pictures of things that might live somewhere in space. Have students display their drawings.

Be the Expert

About the Photo

The people in the photo are looking at stars in our galaxy, the Milky Way. The Milky Way galaxy includes Earth, our solar system, and billions of stars. The Milky Way is a spiral galaxy, or one in which the stars seem to form lines that curve around a bright center. Because our solar system is on the edge of the Milky Way, it is hard to see the galaxy's spiral shape from Earth.

Teaching Tip

Grouping When you group students for activities, try forming groups in different ways for each new activity. For example, have students count off, or group students based on birthday months or favorite colors. Make sure students are not always working with close friends or with other students of equal language ability.



The Milky Way

79

- Ask questions to encourage discussion of the photo:
What living things do you see in the photo? (people)
What nonliving things do you see in the photo? (rocks, mountains, stars, clothing)
Do you see just a few stars or many stars? (many)
- Point out and read the photo caption on p. 79. Invite students to tell what they think the Milky Way is. Then say *The Milky Way is the galaxy in which Earth is located. We can see part of it in the night sky. We will learn more about planets, stars, and galaxies in this unit.*
- Work with the class to complete the activity on p. 78. Read item 1 aloud and have students check the things they see in the photo. Tell them the first one is done for them. Then call on several students to read what they checked. Confirm the answers. Read the item 2 question aloud and have students choose their answers. Then discuss each answer choice. Ask *Clouds can keep us from seeing stars some nights. What else keeps many of us from seeing more stars at night?*

Vocabulary 1

Objective

- Students will
- identify and use words related to outer space.

Vocabulary a planet, orbit, a solar system, a galaxy, the universe, a comet, a journey, search, space, an extraterrestrial

Content Vocabulary Milky Way

Resources Workbook pp. 64–65; Audio CD TR: B29–B30; Video: Vocabulary I; Classroom Presentation Tool: Vocabulary I; World Map Poster; Teacher's Resource CD-ROM: Activity Worksheet 8.1

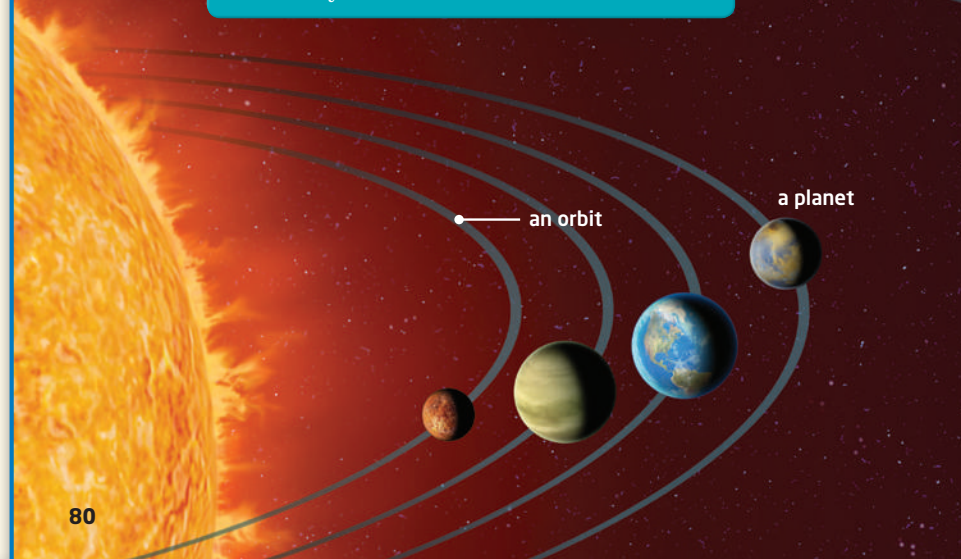
Materials index cards

1 Listen and read. TR: B29

2 Listen and repeat. TR: B30

Did you know that the Sun is a star? Long ago, people thought that the Sun traveled around our **planet**, Earth. But they were wrong! Earth **orbits** the Sun. In fact, lots of planets orbit the Sun! The Sun and all the planets that orbit it make up one big **solar system**. Earth is not as important as we used to think!

A large group of stars, dust, and gas held together by gravity is a **galaxy**. Our galaxy is called the Milky Way. It has about 100 billion stars. That's amazing! Outside our galaxy, there are more galaxies! In fact, the **universe** is filled with galaxies. How many? We don't know! There are too many, and many are too far away to see.



Warm Up

- **Activate prior knowledge** Ask *What town do you live in?* Write the name of the town on the board. *What country do you live in?* Write the country name above the town name.
- **Preteach** Say *Our country is on a planet called Earth.* Write *Earth* above the country name on the board. Say *Eight planets and the Sun make up our solar system. Our solar system is in the Milky Way galaxy.* Write *Milky Way galaxy* above *Earth*. Say *Today we're going to learn words about our galaxy.*

Present

- **Explain** Say *Open your books to pages 80 and 81.* Say each vocabulary word and have students repeat. Draw the Sun on the board. Add to the

drawing as you introduce the new vocabulary. Say *Planets in our solar system orbit, or move around, the Sun. Comets orbit the Sun, too. Planets, comets, and stars make up a solar system. Billions of solar systems make up a galaxy. Billions of galaxies make up the universe.* ✓ Ask questions such as *Is the universe bigger than a galaxy?* (yes)

- Say *Some people think that somewhere in the universe, we'll find extraterrestrials, or living things from other planets. Other people think we will never find out whether there are extraterrestrials.*

Practice 1 2

- **1** Say *We're going to read and listen to information about space. Read the paragraphs on pages 80 and 81 as you listen.* Play **TR: B29.**

space

A **comet** is a cloud of rock, ice, and gas that orbits the sun. Many earth years pass in its **journey** around the sun. Scientists **search space** for comets. Then they predict when the next one will appear. Have you ever seen a comet?

a comet

a galaxy

Think of the many galaxies in the universe. Think of the many stars in each galaxy. Think of the many planets that orbit the stars. Do you think that **extraterrestrials** may live on one of the planets? No one knows the answer!

- **3 Work with a partner.** What did you learn? Discuss.

What's the solar system?

It's the Sun and all the planets that go around it.



- Discuss the paragraphs. Ask questions such as:
 - What are two things that orbit the Sun?* (a planet, a comet)
 - What do the Sun and planets make up?* (our solar system)
 - What does a large group of stars, dust, and gas held in place by gravity make up?* (a galaxy)
 - What do people think about but don't know the answer to?* (whether there are extraterrestrials)
- **2** Say *We're going to hear words and sentences with those words. Listen and repeat.* Play **TR: B30.**

Apply 3

- **3** Model the dialogue on p. 81 with a student. Put students in pairs. Say *Think of other questions to ask about the new words. Write them on paper.*

- Give students five minutes to think of questions and answers. Remind them to look at pp. 80–81 for ideas. Then have students discuss. Allow time for students to perform their dialogues for the class.

Wrap Up

- Have two students stand at the front of the classroom. Tell one student *You're the Sun.* Tell the other student *You're Earth.* Ask the class *How should Earth orbit?* (around the Sun.) Have "Earth" orbit the "Sun." Say *Let's add planets and make a solar system.* Call on more students to orbit the "Sun." Make another solar system with more students. Ask *What can we call all these solar systems?* (a galaxy) *What is a galaxy part of?* (the universe)

Be the Expert

Teaching Tip

Keep track of students' participation during class. Let students know that you expect everyone to speak aloud and participate in class. At the end of class, take note of which students have not yet spoken aloud. During the next class, call on these students to answer questions that they have already written answers for. This will help them be more confident as they speak.

Formative Assessment

Can students

- identify and use words related to outer space?

Ask students questions such as *What is the word for a cloud of rock, ice, and gas that moves around the sun? What is Earth an example of? What is the Milky Way an example of? What is the name for beings who may live on other planets?*

Review For additional practice, direct students to Activity Worksheet 8.1.

Objective

- Students will
- speculate using *may* and *might*.

Grammar speculate with *may* and *might*

Academic Language *possible, possibility, speculation*

Resources Workbook p. 66; Audio CD TR: B31; Video: Grammar I; Classroom Presentation Tool: Grammar I

Materials scissors

GRAMMAR TR: B31

I **may** become an astronaut, but I'm not sure.
We **might** find life on another planet. It's possible!
It's cloudy, so you **might** not see the comet.

We **will** learn more about planets next year in school.
I'm sure we **will** find life on another planet.
You **won't** see the comet tonight. It's too cloudy.

4 Talk to a partner. Then check. Compare your answers.

	Right	Wrong
1. I may have a birthday next year.		✓
2. Extraterrestrials will visit our school next week.		✓
3. I will travel to Mars tomorrow.		✓
4. We might find water on other planets one day.	✓	

I will have a birthday next year. I always do!

5 Work in groups of three. Cut out the cards and the word box on p. 111. Explain why each thing could be useful on a hike to see a comet at night.



82

Warm Up

- Say *There are stars in the Milky Way. Is this true?* (yes) *It's going to be clear tonight. I will see lots of stars. Is this true?* (yes) *I use will when I'm sure that something is going to happen. But what if it's going to be cloudy tonight?* Ask *Can I be sure that I will see lots of stars?* (no) *That's right. I can't be sure. I should say "I might see lots of stars tonight."*

Write these sentences on the board:

There are extraterrestrials on other planets.
There might be extraterrestrials on other planets.

- Read aloud the sentences on the board. Ask *Do we know for sure that the first sentence is true?* (no) Ask *Could it be true?* (yes) Say *Many*

people think there are extraterrestrials, but we don't know for sure. So we say, "There might be extraterrestrials on other planets." Have students read the sentence aloud.

Present

- Point out the Grammar box on p. 82. Read or play the first two sentences of **TR: B31**. Say *Use the words may and might to talk about something that could happen. You're not sure it will happen, but you think it can. If you're sure something is going to happen, use will. You can also use may and might to talk about something that could be true, but you don't know for sure.* Read or play the rest of the sentences (**TR: B31**).

Our World in Context

Among the eight planets in our solar system, Earth is unique. As far as we know, Earth is the only planet that has liquid water, which is necessary for life. It's possible that other planets or their moons might have liquid water on them. We'll have to do more exploring to know for sure. We do know that at least one moon has frozen water. Europa, one of Jupiter's moons, is covered with ice. Scientists think that there might be an ocean of liquid water beneath Europa's ice-covered surface.

Grammar in Depth

Students might wonder when they should use *might* and when they should use *may*. Both of these words express the possibility that something will happen. Some people think that *might* expresses more doubt on the part of the speaker. If the speaker uses *might*, he thinks there is less of a chance that something will happen than if he had used *may*. But, in general, *might* and *may* are interchangeable and can both be used to express possibility.

Teaching Tip

Grouping When students work in groups, make sure each student has a chance to participate. Have students pass an object or card to show whose turn it is to speak. Encourage students to repeat what their classmates said, and then add on. This will help students be active listeners and give them extra practice pronouncing new words.

Formative Assessment

Can students

- speculate using *may* and *might*?
Say a sentence such as *I will play soccer after school today*. Have students revise the sentence to include *may* or *might*: *I (may/might) play soccer after school today*.

- Write the following on the board:

Astronauts will go to the moon again.
There is life on other planets.

- Read aloud the first sentence. Ask *How can we rewrite this to tell that this is something that could happen, but we don't know for sure?* Write the responses. (Astronauts might go to the moon again. Astronauts may go to the moon again.)
- Read aloud the second sentence. Ask *How can we rewrite this sentence to tell that this is something that could be true, but we don't know for sure yet?* (There might be life on other planets. There may be life on other planets.)

Practice 4

- 4** Say *Now you're going to read sentences with will, may, and might. Read each sentence and decide if it's right or wrong. If it's right, put a check mark in the Right column. If it's wrong, put a check in the Wrong column.* Review item 1 of Activity 4 as a class. Have a student read the sentence aloud. Ask the class *Do you have a birthday every year?* (yes) *Are you sure you'll have a birthday next year?* (yes) *So, is item 1 right or wrong?* (wrong)
- Pair students and have partners complete items 2–4. Review the correct answers with the class. Then call on students to tell the right way to say items 1–3. (*I. I will have a birthday next year. 2. Extraterrestrials will not/won't visit our school next week. 3. I will not/won't travel to Mars tomorrow.*)

Apply 5

- 5** Have students read aloud the directions for Activity 5 and cut out the game materials on p. 111. Form students into groups of three and have each student make a pile of his or her cards. Say *Imagine that you and some classmates are going on a hike at night with your teacher, hoping to see a comet.* Call on three students to model the dialogue on p. 82. Tell the class to note how *will* and *may* are used.
- Have groups play the game. Tell them to take turns picking a card and making a sentence. Remind them to use *will, may, or might* in their sentences. Have groups play until all the cards have been used.

Wrap Up

- Say *I'll write a word on the board. When I say "Go," write as many sentences as you can about that word. Use may or might in your sentences. When I say "Stop," put down your pencils.* Write

Objective

- Students will
- identify and use words related to space exploration.

Vocabulary a rocket, a spacecraft, an astronaut, a space station, communicate

Content Vocabulary atmosphere, telescope

Resources Workbook p. 67; Audio CD TR: B32–B33; Video: Vocabulary 2; Classroom Presentation Tool: Vocabulary 2; Teacher’s Resource CD-ROM: Activity Worksheet 8.2

6 Listen and repeat. Then read and write. TR: B32



a rocket

a spacecraft



an astronaut

a space station



communicate

1. What do you do?
I'm an _____. I work in space.
2. Where do you live when you work in space?
In a _____. It's very small, but we can move.
3. How do you get to space?
We travel by _____. A _____ lifts us up there!
4. Do you talk to your family from space?
Yes, I _____ with them every day.

7 Listen and stick. Work with a partner. Take turns describing the rocket liftoff. TR: B33

1

2

3

4

5

83

Warm Up

- **Build background** Say *There might be life in outer space. How do we find out? We send machines and people into space!* Ask *Who wants to go into space? Raise your hand. Who thinks we'll find life on other planets? Raise your hand.* Call on students to give reasons for their opinions.

people who explore space. Sometimes astronauts live and work in a large spacecraft called a space station. A space station orbits Earth.

- Point to the word *communicate*. Say *People on Earth communicate with astronauts in a space station. They talk to each other. How do you communicate with others?* (talk in person or on the phone, text, e-mail) Point out the photo of the radio telescope and say *This is a telescope. It helps scientists search for extraterrestrial communication.*

Present

- Say *Let's learn more words about space. Open your books to page 83.* Point out the rocket and spacecraft. Say *A rocket pushes a spacecraft through Earth's atmosphere into space. A spacecraft travels through space.* Point out the astronaut and space station. Say *Astronauts are*

Practice 6

- **6** Say *Now you'll hear words and sentences with those words. Repeat each word and sentence after you hear it.* Play TR: B32. Then talk about the vocabulary words with students. Ask questions such as:

- What helps a spacecraft from Earth reach space?* (a rocket)
- What is the word for someone who travels in space?* (an astronaut)
- What do astronauts use to travel in space?* (a spacecraft)
- Astronauts in space live in this. It orbits Earth. What is it?* (a space station)
- What do astronauts do when they talk to Mission Control?* (communicate)

- Direct students' attention to the sentences below the photos on p. 83. Explain to students that the sentences are in the form of an interview. Each item has a question followed by an answer that includes one or two vocabulary terms they just learned. Call on two students to model item 1. Have Student 1 read the question. Then prompt Student 2 to read *I'm an _____. I work in space.* Ask *Which word makes the most sense in this sentence?* (astronaut) Then have Student 2 read the completed response. Have students complete items 2–4 individually. ✓ After students have completed the activity, ask *Do astronauts live and work in a space station or a rocket?* (a space station) If students answer *rocket*, remind them that rockets are used to help send things into space.

Apply 7

- **7** Say *Let's do a sticker activity with the new words we learned.* Assign partners and tell them to read the directions. Play TR: B33 once and tell students to listen without placing the stickers.
- Say *Listen to the rocket liftoff again. When the announcer says one of the vocabulary words, take turns putting the sticker with the correct word in the numbered box.* Play TR: B33 again and have pairs complete the activity. Then, have partners use the stickers they placed to retell what happened in the rocket liftoff.

Wrap Up

- Have one student close his eyes. Write a vocabulary word on the board for the class to see. Then, erase it and have the student open his eyes. Call on students in the class to say one word at a time to give clues about the vocabulary word. For example, for *astronaut*, clues might include *person, space, and travels*. Count how many clues are given before the student can guess the word. Call on other students to guess other vocabulary words.

Our World in Context

In 1957, the Union of Soviet Socialist Republics launched the world's first spacecraft. It was called Sputnik 1. Since then, many other countries have launched spacecraft.

Today, astronauts can live in space on the International Space Station. A typical visit to the International Space Station lasts about six months. While in space, astronauts need to exercise at least two hours a day because living in a low-gravity environment can be harmful to the body's muscles. To sleep, astronauts must fasten themselves to part of the space station so they don't float around!

Teaching Tip

Classroom Management Help students practice good listening skills. When a student is waiting to respond to a question, she might not pay attention to what her classmates have already answered. Have the student repeat or rephrase the previous student's answer before she shares her own.

Formative Assessment

- Can students
- identify and use phrases related to space exploration?
- Hold up the book and point to the photos on p. 83. Ask students to name each photo you point to. Ask questions such as *What takes a spacecraft into space? What do we call people who travel in space? Where do astronauts live and work in space?*

Review For additional practice, direct students to Activity Worksheet 8.2.

Objectives

Students will

- talk about life in space using *everyone, someone, anyone, and no one*.
- talk about family members and classmates using *everyone, someone, anyone, and no one*.

Grammar use indefinite pronouns (*everyone, someone, anyone, no one*)

Academic Language *pronoun, in general*

Content Vocabulary *habit, Mars*

Resources Workbook p. 68; Audio CD TR: B34; Video: Grammar 2; Classroom Presentation Tool: Grammar 2; Teacher's Resource CD-ROM: Activity Worksheet 8.3

Materials photo of a boy from a magazine; photo of a girl from a magazine; scissors

GRAMMAR TR: B34

Did **everyone** see that comet?
Someone will go to Mars one day.

Does **anyone** want to be an astronaut?
No one can see all the stars in the universe.

8 Read and write. Complete the paragraph.

anyone everyone no one someone

_____ likes to think about life on other planets.

Does _____ know the answer? No!

_____ knows for sure if there is life out there or not. If

_____ tells you that she knows, she really doesn't know.

9 Work in groups of three. Ask and answer questions. Take turns. Make notes.

1. Does anyone in this group think there is life on other planets?
2. Name one thing everyone in your family does.
3. Name a kind of music that no one in your group likes.
4. Name a funny habit someone in your family has.
5. Name someone in your class who would like to be an astronaut.

10 Discuss. Share the results of your survey.



84

Warm Up

- **Activate prior knowledge** Hold up a photo of a boy. Say *We don't know this boy's name. What words do we use to talk about a boy when we don't know the boy's name?* (he, him) Hold up a photo of a girl and ask a similar question. Then hold up both photos. Ask *What words do we use to talk about more than one person when we don't know their names?* (they, them)

Present

- **Explain** Write *someone, everyone, anyone, and no one* on the board. Say *Today, you'll learn more words to talk about a person or people. Someone means some person. Everyone means every person. Anyone means any one person. No one means no person. These words don't tell about just one person. We use these words to talk about people as a group.*

- Point out the Grammar box on p. 84. Play TR: B34. Then have students read each bold term aloud. Write this sentence frame on the board: _____ on Earth has met an extraterrestrial. Say *Which word or words in the box complete this sentence?* (No one) *No one is correct. People are still looking for extraterrestrial life. So, no person, or no one, has met an extraterrestrial.*

Practice 8

- 8 Say *In this activity, you'll fill in each blank with a word or words from the box. Let's do the first one together.*

Grammar in Depth

A pronoun is a word that can replace a noun in a sentence. *Anyone, someone, everyone, and no one* are examples of indefinite pronouns. They are called *indefinite* because they do not refer to a specific person or people. Instead, they talk about a person or people in general. Other indefinite pronouns that talk about a person or people include *anybody, somebody, everybody, and nobody*. Indefinite pronouns that talk about a thing or group of things include *anything, something, everything, and nothing*.

Teaching Tip

Grouping Change the way you group students for activities. You can use vocabulary and grammar to help put students in groups. For example, choose vocabulary or grammar and write two to four synonyms on individual index cards. You might write *no one* and *nobody* or *huge, big, and large*. Give an index card to each student. Have students group themselves by finding classmates with synonyms for their word.

Formative Assessment

Can students

- talk about life in space using *everyone, someone, anyone, and no one?* Ask students questions about life in space. Say *Has anyone ever journeyed to Mars? Will anyone journey to a space station ever again? Have students answer using the correct indefinite pronouns.*
- talk about family members and classmates using *everyone, someone, anyone, and no one?* Ask questions such as *What is something that everyone in our class does? What is something that someone in your family does? What is something that no one in our class has done?* Have students answer in complete sentences that include the indefinite pronoun.

Review For additional practice, direct students to Activity Worksheet 8.3.

- **Think Aloud** Model completing the first sentence by thinking aloud. Say *I'll try each word in the blank and see which one makes the most sense. I think many people like to think about life on other planets. Someone and anyone tell about just one person, so those aren't right. No one doesn't work, because people do like to talk about life on other planets. Everyone works best, because all people have opinions.* Have students write *Everyone* in the blank.
- Have students complete the remaining sentences. ✓ Ask *Does everyone or no one have an opinion about whether there is extraterrestrial life?* (everyone) If students have trouble, point out the word *no* in *no one*.

Apply 9 10

- 9 Say *Now you're going to take a survey of your classmates to find out some information.* Read the directions to Activity 9 aloud. Demonstrate how to answer the first question. Have a student read item 1 aloud. Give a sample answer, such as *Someone in this group thinks there is life on other planets. That person is (David).*
- Put students in groups of three and have them take turns reading and responding to items 1–5. Say *Remember to use everyone, someone, anyone, or no one to answer.* Explain that to complete some of the items, group members will have to discuss the topic first. For example, for item 3, each group member will have to say what kind of music they don't like. Tell students they should record one another's responses. They will need them for the next activity.
- 10 When all students have asked and answered questions, give groups time to review their notes and rewrite them if necessary. Then call on groups to share the results of their surveys.

Wrap Up

- Ask the class questions about space. Use *anyone* in your sentences, and have students respond by raising their hands. Say *Does anyone want to be an astronaut? Has anyone seen a comet? Has anyone met an astronaut?* After students raise their hands, call on another student to say a sentence about the responses using *everyone, someone, or no one*. (Someone wants to be an astronaut. No one has seen a comet. Someone has met an astronaut.)

Song

Vocabulary

Vocabulary I a journey, a solar system, a planet, space, the universe

Grammar

Grammar I speculate with *may* and *might*

Resources Workbook p. 69; Audio CD TR: B35; Video: Song; Classroom Presentation Tool: Song; Teacher's Resource CD-ROM: Activity Worksheet 8.4

Materials drawing paper; markers or crayons

Related Vocabulary atmosphere

The Sounds of English

Resources Workbook p. 69; Audio CD TR: B36; Classroom Presentation Tool: The Sounds of English; Picture Cards 28, 43, 71, 106, 124, 141, 302, 466; The Sounds of English Card 18

11 Listen, read, and sing. TR: 76

Deep in Outer Space

Let's all take a journey
past the atmosphere,
beyond our solar system,
far away from here.

We might find a new planet.
We might find a new place.
We might find things we've never seen
deep in outer space.

Deep in outer space,
who knows what we might find?
Deep in outer space,
deep in outer space!

THE SOUNDS OF ENGLISH TR: 77

name

12 Listen and say.

1. name never
2. astronaut journey
3. station dolphin

Rosette Nebula

85

Use the Song 11

- **11 Act it out** Say *We've talked about space and the universe. We've talked about the possibility of life in space. Now we're going to listen to a song about a journey, or a trip, to outer space. Listen to the song and watch what I do.*
- Play (TR: B35) through the first chorus for students. Perform actions that go with the song. For example, act out *find* by shading your eyes with your hand and turning your head from side to side. Then replay the same part of TR: B35 and have students copy your actions.
- Write *a journey, a solar system, a planet, and space* on the board and read the words aloud. Say *Open your books to page 85. Let's read the words of the*

song aloud together. Point to the words on the board. Say *Raise your hands when you see any of these words.*

- Put students in pairs. Have partners use the ideas in the song and the words on the board to talk about life in outer space. If students need help getting started, write questions on the board, such as: *Would you like to take a journey into space? What is beyond our solar system? What is meant by "deep in outer space"? Do you think there is life out there?*
- After students finish talking, call on pairs to share one or two ideas from their discussions. Then have students turn to p. 96 in their book and sing along as you play all of *Deep in Outer Space*.

Extend

- Sing or play the chorus of *Deep in Outer Space* and have students identify the question. ("... who knows what we might find?") Then sing or play the first four verses of the song. Ask *What are some things we might find?* Have students respond in complete sentences using *might*. (We might find things we've never seen. We might find a new planet. We might find a moon where flowers grow.) If students have trouble, write the sentence frame *We might find _____* on the board
- **End of unit** Read aloud the second verse of the song. Have students take an end-of-lesson "Space Journey." Hand out drawing paper and markers or crayons. Say *Draw a picture of something you've never seen before that could be in outer space. On the back of your drawing, write a sentence or two that explains what your drawing shows.* Allow time for students to discuss their drawings in small groups.

The Sounds of English: /n/ as in name 12

- **12** Display a picture of the solar system or use the photo on pp. 80–81. Point to the planets orbiting the Sun. Ask *What are these?* Say *That's right. They're planets.* Write *planet* on the board, say it, and have the class repeat. Underline *n*. Then say the word again, carefully enunciating the /n/ sound.
- Say *Now let's listen for other words that have the same /n/ sound you hear in planet.* Play TR: B36 once while students listen. Then say *Let's listen and say.* Play TR: B36 again and have students repeat. Tell students to pay attention to the sound of *n* in each word and where in the word it occurs. Point out that they hear it at the beginning of a word (*name, never*), in the middle of a word (*astronaut, journey*), and at the end of a word (*station, dolphin*). Play TR: B36 once more.
- To check understanding, have ready the Picture Cards for *pencil, sun, dining room, train, nose, lemonade, penguin, and knee*, as well as some cards for words that do not include the target sound. Hold up a card or picture, say the word, and have students raise their hands if they hear the target sound. Say *Look and listen. Raise your hand if you hear /n/ as in name.* If students raise their hands in error, repeat the incorrect word and a word with the target sound to demonstrate the contrast.
- Finally, tell students to think of the target vocabulary words from the unit. Challenge them to call out any that have the sound of *n*. (*journey, planet, universe, astronaut, communicate*)

About the Photo

This is a photo of the Rosette Nebula. Nebulas are clouds of gases and dust that are located between stars. The Rosette Nebula looks like a flower, which is how it got its name. The group of stars at the center are young stars. They are only a few million years old.

Teaching Tip

Songs are useful for energizing a class. Singing and dancing allow students to use their bodies and their voices, which is a change of pace from sitting at their desks and listening. You might ask students to illustrate the song or create a short skit to go with the song. They can also tap out rhythms they hear in the song, which is a good way to call attention to syllables and intonation.

The Sounds of English Cards

You can use The Sounds of English Card 18 to teach the /n/ sound. The card and corresponding audio are available on the *Explore Our World* website.

Objectives

- Students will
 - describe how scientists are searching for life in space.
 - form opinions and give reasons to support them.

Academic Language *opinion*

Content Vocabulary *telescopes, signal, satellite dishes, light-years*

Resources Workbook pp. 70–71; Audio CD TR: B37; Classroom Presentation Tool: Reading; Teacher’s Resource CD-ROM; Graphic Organizers (Spider map)

Materials picture of a satellite phone

13 Listen and read. TR: B37

Listening for Life

Have you ever seen a movie about extraterrestrials? They come to Earth and cause trouble, or they make friends with us, right? The movies are fun, but real life is very different. No one has seen an extraterrestrial. If they exist, they live on planets in other solar systems. That’s very far away. Right now, we can’t see the planets in other solar systems, even with our biggest telescopes.

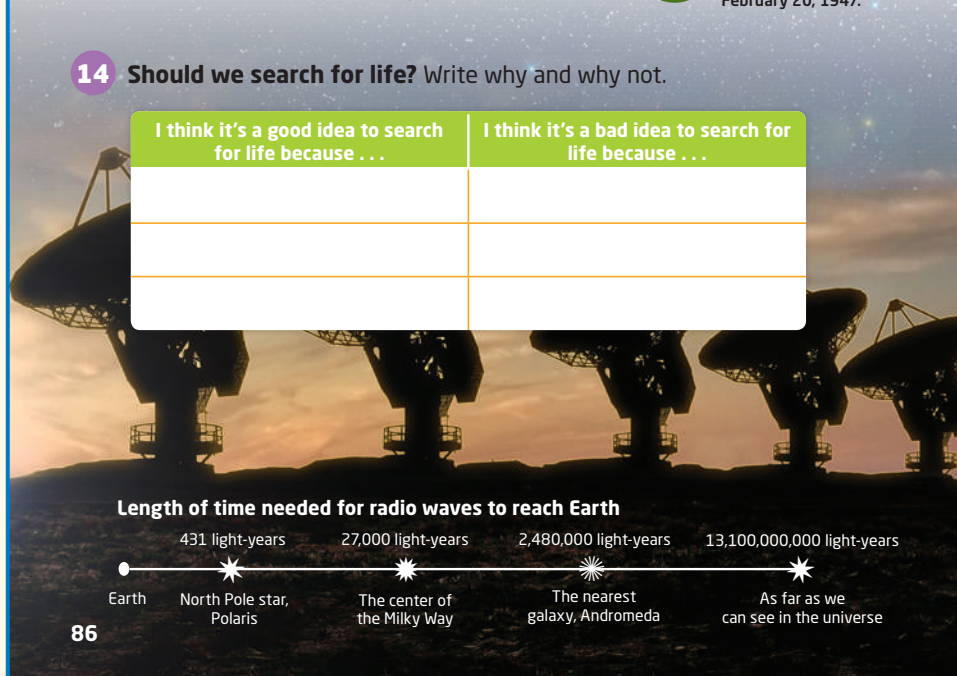
We haven’t heard from an extraterrestrial yet, either. Some people think that they are trying to communicate with us. But to do this, extraterrestrials would need to send a message through space. Their message would have to travel a long way to reach our solar system. That could take thousands of years! The signal that we receive would be very weak, so we might not hear the message. But that doesn’t mean we’re not listening. Scientists have set up a system of satellite dishes to search outer space for sounds of life from other planets.

One day we may know the truth about extraterrestrials. For now, let’s enjoy the movies!

weird true
The first astronauts were fruit flies. They were launched on February 20, 1947.

14 Should we search for life? Write why and why not.

I think it’s a good idea to search for life because . . .	I think it’s a bad idea to search for life because . . .



Warm Up

- **Build background** Hold up a picture of a satellite phone. Ask *Do you know how a satellite phone works?* Say *It exchanges information with a satellite in space! These satellites orbit Earth. Cellular phones are different than satellite phones because they use cell towers instead of satellites.*
- Ask *How would extraterrestrials communicate with us? What might they use?* (signals, phones, spacecraft) Say *Scientists build tools to listen for extraterrestrial signals. We’ll read more about how scientists search for life on other planets.*

Present 13

- **13** Say *Open your books to page 86. Read along as you listen.* Play **TR: B37.**

- Play **TR: B37** a second time. Pause at the end of each paragraph to ask questions such as:
 - Paragraph 1:** *Why can’t we see extraterrestrials on planets in other solar systems?*
 - Paragraph 2:** *If extraterrestrials were sending messages to us, why would the signal we receive be very weak? What listening tool do scientists use today?*

Practice

- **Graphic literacy** Have a student read aloud the title of the time line on p. 86. Say *We read time lines from left to right.* Ask *What word is at the left of the time line?* (Earth) Say *As we move to the right, we see objects that are farther and farther away from Earth.* Ask questions about the time

line such as *What is 27,000 light-years away?* (the center of the Milky Way)

- **Contextualize** Ask *How far away is the North Pole star?* (431 light-years away) Explain *light-year.* Say *A light-year is the distance light travels in a year. One light-year is about 6 trillion miles. The nearest galaxy, Andromeda, is two and a half million light-years away! That is very, very far away.*

Apply 14

- **14** Say *People have different opinions about things.* Remind students that opinions tell how a person feels about something. Tell students that opinions are neither right nor wrong. Ask *Do you think it would be fun to live in a space station for a year? Why or why not?* Get different answers. Say *We have different opinions about living in a space station.*
- Say *Now we’ll give our opinions about another topic.* Read the directions to Activity 14 and the column headings in the chart. Say *First, decide what your opinion is. Do you think it’s a good idea or a bad idea to search for life in space?* Give students time to think about the question. Then say *In the chart, write reasons for your opinion. Then, think about the other heading in the chart. Ask Why would some people think it’s a good or bad idea to search for life in space?* Say *Write some reasons in the chart.*
- Put students in pairs. Say *Talk with your partner about searching for life in space. Use the reasons you wrote in your chart to support your opinion.* Allow time for partners to discuss the topic. Tell the class *Raise your hand if you think it’s a good idea to search for life.* Record the number of students on the board. Repeat the process for those who think it’s a bad idea.

Wrap Up

- Say *Let’s communicate across a long distance.* Place students in a line. Have the student at the front of the line find a fact from the Reading or the time line. Say *Tell your fact to the person next to you, but don’t let anyone else hear it!* Model by whispering a sentence to the first student such as *A message from Andromeda could take thousands of years to reach Earth.* When the sentence reaches the end of the line, have the last student say it aloud. Ask the students *Is that what you heard?* Have students switch places and repeat the activity with a new fact.

About the Photo

This photo shows radio telescopes used by SETI (Search for Extraterrestrial Intelligence) scientists. These radio telescopes listen for signals coming from outer space. SETI radio telescopes are in the United States, Puerto Rico, Argentina, Australia, and Italy.

Our World in Context

The first astronauts were insects and animals! Fruit flies were sent into space in 1947. Later on, scientists sent a monkey and a dog into space. Today, scientists send smaller animals with humans to help study the effects of space on the body. In 2011, mice were sent into space to help researchers study the effects of a low-gravity environment on bones.

Formative Assessment

- Can students
- describe how scientists are searching for life in space?
Ask students questions such as *What tool did scientists build for listening to signals from outer space? If extraterrestrials are trying to communicate with us, why haven’t we received their signals yet?*
 - form opinions and give reasons to support them?
Give students a new topic and ask them to give opinions and reasons to support their opinions.

Mission

Mission Live curious.

Objectives

- Students will
- share ideas.
- evaluate ideas.

Resources Video: Meet the Explorer: Kevin Hand

Be the Expert

About the Photo

The photo shows Jupiter, one of the planets in our solar system, and Europa, one of its moons. Jupiter has more than 60 moons. Its four largest moons are Io, Europa, Callisto, and Ganymede. Most of the rest of Jupiter's moons are very small. National Geographic Emerging Explorer Kevin Hand is studying whether there might be life on Europa.

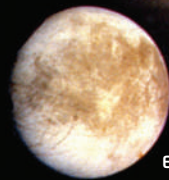
Meet the Explorer

Kevin Hand grew up in Vermont where he loved to look at the stars. One of his elementary school science teachers inspired him to study planets. Today, he works for NASA (National Aeronautics and Space Administration).

His life's work is exploring the possibility that life exists on Europa, one of Jupiter's moons. Europa's surface is covered by ice that is several kilometers thick. Scientists think that under the ice is an ocean that might be as much as 97 kilometers (60 miles) deep. Hand is part of a team working to launch an unmanned spacecraft to Jupiter and its moons in 2020 to gather information.

Be curious.

Think about things you want to know. How can you find answers?



Europa



Kevin Hand
Planetary Scientist/Astrobiologist
Emerging Explorer



87

"We finally have the tools and technology to answer this age-old question: Are we alone? Jupiter's moon Europa is a beautiful place to go and explore that question."

Mission

- Have students look at p. 87. Read aloud the mission at the top of the page. Say *It's good to be curious about the world around us. When we are curious, we look for answers. We want to know more. The answers to our questions can help us know more about Earth and the universe.*
- Encourage a discussion about being curious with questions such as:
 - What questions do you have about Earth and the universe?*
 - How do scientists find answers to their questions?*
 - How can you find answers to your questions?*
- Pair students and give them time to discuss the questions and write down some ideas.
- Then have each pair of students join another pair to share their ideas. Ask each group questions about their ideas such as *What different ideas did you have? Which idea does everyone like best? Why?*

Assessment

Resources Assessment Book pp. 75–76, 79–83, 87–89, 91–92, 95–96, 98–99; Audio CD TR: AB42–AB43, AB46–AB49

Be the Expert

Testing Tip

Write and speak in complete sentences. Remind students that they should always write in complete sentences when answering questions or completing a writing task, and that during speaking tasks, they should answer with complete sentences.

Give the Unit Quiz

- **Listening instructions, Section 1** Point to the pictures and letters on p. 75. Say *Write the letter that matches the sentence you hear. Listen to an example.* Play **TR: AB42**. (He's an astronaut.) Ask *What letter did you write?* When students respond with A, begin the quiz. Play the rest of **TR: AB42**.
- Read the directions for Section 2 aloud. Ask *What do you have to do?* (Complete the sentences. Use words from the box.) Repeat for Sections 3 and 4. (3: Complete the sentences. Use *everyone, no one, someone, or anyone*. 4: Read. Circle *True* or *False*.)
- **Listening instructions, Section 5** Read the directions aloud. Say *Listen to an example. Write the missing words to complete the sentence you hear.* Play **TR: AB43**. (Earth orbits the Sun.) Confirm that students completed the sentence correctly. Play the rest of **TR: AB43**.
- **Speaking instructions** Point to the image at the bottom of p. 87. Say *Look at the picture. Answer my questions. Use complete sentences. Now listen to an example.* Ask *What does he do?* Point to the man. Say *He's an astronaut.* See pp. 91–92 of the Assessment Book for prompts and expected student responses.

Give the Mastery Test

- **Listening instructions, Section 1** For the example on p. 79, play **TR: AB46**. (The lion is a predator.) Correct response: *B*.
- Confirm understanding of the directions. (2, 3: Complete the sentences. Use words from the box. 4: Read. Circle *True* or *False*.)
- **Listening instructions, Section 5** Play the example on **TR: AB47**. (Jazz is amazing, isn't it?) Continue the test when students complete the sentence correctly.
- **Speaking instructions** Point to the spots on the cheetah at the bottom of p. 88. Ask *What are these?* Say *They're spots.* See p. 92 of the Assessment Book for prompts and expected student responses.

Give the Final Test

- **Listening instructions, Section 1** For the example on p. 81, play **TR: AB48**. (It's a sea turtle.) Correct response: *F*.
- Confirm understanding of the directions. (2: Circle the correct answer. 3: Read. Circle *True* or *False*.)
- **Listening instructions, Section 4** Play the example on **TR: AB49**. (Are you someone who has good ideas?) Continue the test when students complete the sentence correctly.
- **Speaking instructions** Point to the bug on p. 89. Ask *What's on the tree?* Say *It's an insect.* See p. 92 of the Assessment Book for prompts and expected student responses.

Assess Unit Objectives

- Ask questions such as the following:
- *What do astronauts do in space?*
 - *What might astronauts find on other planets one day?*
 - *Do you want to journey to another planet? Why?*

Project For a theme-related closing activity, direct students to the Unit 8 Project Worksheet.

Vocabulary 1 a planet, space, a solar system, a galaxy, the universe, a comet, orbit, a journey, an extraterrestrial, search

Vocabulary 2 an astronaut, a rocket, a spacecraft, a space station, communicate

Grammar 1 speculate with *may* and *might*

Grammar 2 use indefinite pronouns (*everyone*, *someone*, *anyone*, *no one*)

Song *Deep in Outer Space*

Viewing space and space exploration

Meet the Explorer Kevin Hand

Story Time *How the Milky Way Began*

Resources Student Book pp. 78–84, 87; Teacher's Resource CD-ROM: Graphic Organizers (Two-column chart)



Zoom In

Vocabulary

- Play the vocabulary segments. Pause at the images in each frame. Ask students to say the vocabulary word for each picture. Press *Play* to bring up the caption and check students' answers.

Grammar

- Pause the first Grammar segment after the character says what he wants to be. Ask students to describe what the character wants to be, using the word *may*.

Song

- Play the song. Divide the class into five groups. Assign each group a verse from *Deep in Outer Space*. Have each group sing their verse along with the singer in the video. Sing the chorus as a class.

Viewing

- After students watch the viewing segment, draw an outline of Earth. Say *Imagine we're astronauts. What might we see after we leave Earth?* (the space station, stars, planets, comets, other galaxies)

Meet the Explorer

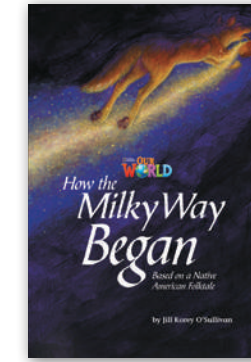
- Play Meet the Explorer. Say *Kevin Hand wants to find out if there's life in the outer solar system. He's searching for life in the ocean world of Jupiter's moon Europa. Ask Do you think there might be life on Europa or another ocean world? Why or why not?*

Story Time

- View *How the Milky Way Began* once.
- View it again. Pause the video and ask questions such as *How did the man and woman know that someone was stealing their corn?* (They found it on the ground.) *Why did the woman think the thief was a spirit dog?* (Its paw prints were so big that it couldn't be a normal dog.)

How the Milky Way Began

Long ago people told stories to explain how the universe began. The Cherokee people of North America believed that there was only a moon in the sky, with no stars to keep it company. What story did the Cherokee tell about how the Milky Way began?



Before You Read

- **Predict** Say *We're going read a folktale. Folktales are often stories about things that happen in the natural world, such as thunder and lightning. Some folktales are about the beginning of something, such as the moon and stars. This folktale is a Native American folktale about how stars appeared in the night sky. How do you think the folktale might tell that stars got in the sky?* List a few student predictions on the board.
- **Introduce the strategy** Give students examples to help them understand what sequence of events means. Say *Today I woke up. Then I ate breakfast. I (drove) to school. And now I'm teaching this class. That is the sequence of events of my day. It's the order that things happened.*
- Say *As we read the story, we'll use a storyboard to keep track of the sequence of events.* Give students a storyboard graphic organizer.

While You Read

- Stop as you read to ask students questions about the main events. Have students list the main events and write answers to each question in their storyboard organizer.
 - p. 5: *What do the man and woman find on the ground of the storehouse?*
 - p. 7: *What do the man and woman see when they hide in the storehouse?*
 - p. 8: *What do they find in the morning? What does the woman think it is?*
 - p. 9: *What did the man carry to the storehouse when he heard a noise there?*
 - p. 10: *What does the spirit dog do when the man shouts "Go away?"*
 - p. 11: *What does the corn turn into?*

After You Read

- Put students in groups of three. Assign students to be the characters of the woman, the man, and the dog. Have each group act out the story according to the events in the storyboard.

Text Type folktale

Reading Strategy Identify Sequence of Events

Vocabulary the universe, a comet, a galaxy, a planet, a journey

Grammar speculate with *may* and *might*; use indefinite pronouns (*everyone*, *someone*, *anyone*, *no one*)

Resources Video: Story Time; Classroom Presentation Tool: Story Time; World Map Poster; Teacher's Resource CD-ROM: Graphic Organizers (Storyboard)

Be the Expert

Our World in Context

How the Milky Way Began is a folktale told by the Cherokee people. Before European settlers came to North America, the Cherokees lived in what are the present-day American states of Georgia, Tennessee, North Carolina, and South Carolina. Show students a globe and point out the United States. If possible, point out these four states to students.

Reading Strategy

Identify Sequence of Events

Identifying the sequence of events in a story can help students understand a story. It can also help students identify causes, effects, problems, and solutions. While reading, ask questions after every few pages to check students' understanding of the story and the sequence of events. After students have read the entire story, have them briefly summarize the story events in their own words.

Text Background

Originally, Native American folktales were passed down orally. A storyteller might tell a story around a fire at night, adding repetition and rhythm to help listeners remember the story. Many Native American folktales, like this one, explain how things on Earth and in nature came to be.

Student Book

TR: B29 Unit 8. 1 Listen and read.

Did you know that the Sun is a star? Long ago, people thought that the Sun traveled around our planet, Earth. But they were wrong! Earth orbits the Sun. In fact, lots of planets orbit the Sun! The Sun and all the planets that orbit it make up one big solar system. Earth is not as important as we used to think!

A large group of stars, dust, and gas held together by gravity is a galaxy. Our galaxy is called the Milky Way. It has about 100 billion stars. That's amazing! Outside our galaxy, there are more galaxies! In fact, the universe is filled with galaxies. How many? We don't know! There are too many, and many are too far away to see.

A comet is a cloud of rock, ice, and gas that orbits the sun. Many earth years pass in its journey around the sun. Scientists search space for comets. Then they predict when the next one will appear. Have you ever seen a comet?

Think of the many galaxies in the universe. Think of the many stars in each galaxy. Think of the many planets that orbit the stars. Do you think that extraterrestrials may live on one of the planets? No one knows the answer!

an orbit; a planet; space; a comet; a galaxy

TR: B30 2 Listen and repeat.

- a planet Earth is a planet.
- orbit Earth orbits the sun.
- a solar system Earth is the third planet in our solar system.
- a galaxy Our galaxy is called the Milky Way.
- the universe There are many galaxies in the universe.
- a comet A comet is made up of rock, ice, and gas.
- a journey A journey to another planet could take many years.
- search It is important to search for life on other planets.
- space There is no air in space.
- an extraterrestrial Some people think that extraterrestrials live on other planets.

TR: B31 Grammar

Student 1: I **may** become an astronaut, but I'm not sure.

Student 2: We **will** learn more about planets next year in school.

SI: We **might** find life on another planet. It's possible!

S2: I'm sure we **will** find life on another planet.

SI: It's cloudy, so you **might** not see the comet.

S2: You **won't** see the comet tonight. It's too cloudy.

TR: B32 6 Listen and repeat. Then read and write.

- a rocket A rocket has enough power to reach space.
- a spacecraft A spacecraft has traveled to the moon.
- an astronaut An astronaut travels in space.
- a space station A space station orbits Earth.
- communicate Astronauts communicate with Mission Control for directions.

TR: B33 7 Listen and stick. Work with a partner.

Take turns describing the rocket liftoff.

Controller: Ready to begin the liftoff!

Announcer: Mission control is about to start the count down.

C: Start the engines!

A: They have started the rockets.

C: 10, 9, 8...

A: The rockets are burning. They will soon lift the spacecraft from Earth.

C: ...4, 3, 2, 1. We have liftoff!

A: The spacecraft is moving! And the two astronauts are leaving Earth! Can you imagine the excitement for those two astronauts? It's not their first time in space. Both astronauts lived on the space station for four months. They returned to Earth from the space station just one year ago. Soon Mission Control will be able to communicate with them. They can't communicate during liftoff. After orbiting the earth, the ship will land on the moon.

TR: B34 Grammar

Did **everyone** see that comet?

Does **anyone** want to be an astronaut?

Someone will go to Mars one day.

No one can see all the stars in the universe.

TR: B35 11 Listen, read, and sing.

Note: Lyrics for the song *Deep in Outer Space* are on Student Book p. 96.

TR: B36 12 The Sounds of English /n/ name.

Listen and say.

1. name; never 2. astronaut; journey 3. station; dolphin

TR: B37 13 Listen and read.

Note: Text for the Reading *Listening for Life* is on Student Book p.86.

Workbook

TR: 40 Unit 8. 11 Listen and circle the answer.

- 1. All the kids in my class want to go to the planetarium. 2. None of my sisters saw the comet. 3. Any student from our class can answer that question. 4. I want to invite my best friend to come with me.

Answer Key

Student Book

Unit Opener SB p. 78

1. The Milky Way, stars, mountains, light, jackets, gloves 2. Answers will vary.

4 SB p. 82

1. Wrong 2. Wrong 3. Wrong 4. Right

5 SB p. 82

Sample answers:

Let's take some cookies. We may feel hungry.; Let's take a camera. We might want to take photos of the comet.; We should wear warm clothes. It will be cold.; Let's take our raincoats. It might rain.; Why don't we take some water? We may feel thirsty.; How about a flashlight? It will be useful in the dark.; We should wear boots. The ground might be hard.; Let's take a first-aid kit. We might fall or cut ourselves.; How about a cell phone? We may need to call

TR: 41 12 Listen to the song. List some things the song says we might find. Then write a new verse!

Note: Lyrics for the song *Deep in Outer Space* are on Student Book p. 96.

TR: 42 14 Listen to two words. Write the word that has the same n sound you hear in lightning.

- 1. lightning; fireworks 2. disappear; sandstorm 3. alone; sweet 4. controller; happy 5. resource; astronaut 6. enjoy; movies 7. move; insect 8. snow; grow 9. knee; tree 10. robot; violin

TR: 43 15 Listen and read.

Note: Text for the Reading *Life on Mars* is on Workbook p. 70.

someone.; We should take a gift. We might meet an extraterrestrial!; We should take a map. We might get lost.; Let's take a paper bag. We may need to take our trash home.

6 SB p. 83

1. astronaut 2. space station 3. spacecraft, rocket 4. communicate

7 SB p. 83

1. rocket 2. spacecraft 3. astronauts 4. space station 5. communicate

8 SB p. 84

Everyone, anyone, No one, someone

Workbook

Go to pp. 220–221 for the Workbook Answer Key for this unit.

Vocabulary Units 5-8

Grammar Units 5-8

Resources Workbook pp. 72-75; Audio CD TR: B38; Teacher's Resource CD-ROM: Graphic Organizers (Three-column chart)



1 **Carla is doing a survey about music.** What are her questions? What do Laura and Andres answer? Complete the chart. **TR: B38**

Questions	Laura	Andres
1.	hip-hop	
2.		
3.		He likes to sing. He sang in public once.
4.	none	

2 **Do a survey.** Ask two other students the same questions. Take notes.

3 **Work in groups of three.** One of you is going on vacation to a place with extreme weather. How are you going to prepare? Take turns to ask questions and give advice.

hurricane
sandstorm
flood
ever
blizzard
never
tornado
plan
supplies

I'm going to Antarctica! That's cool, isn't it? Have you ever been there?

I'm going to bring very warm gloves!

No, I've never been there. What are you going to pack?

If you go to Antarctica, you need more than warm gloves!

Listen 1

- Ask *What types of music do you know?* (hip-hop, classical, pop) *What instruments did we learn about?* (a guitar, a violin, a piano, a saxophone, a drum, a flute) Write students' answers on the board.
- 1 Point to the chart on p. 88. Say *Carla's doing a survey. She asks questions about music. Laura and Andres answer the questions. Write the questions and answers you hear.* Play **TR: B38**. Pause after each question and answer set to give students time to write. Point out that at times, Carla asks more than one question. After students listen, ask questions such as *Who does not like classical music and hip-hop?* (Andres) *Who would like to play the guitar?* (Laura)

Speak 2 3

- 2 Have students form groups of three and give them a copy of the three-column chart organizer. Say *Copy the questions from the chart in Activity 1 onto your chart. Ask your partners the same questions Carla asks her friends. Write their answers. Then answer your partner's questions.* Walk around the room and listen to students' conversations.
- 3 Have a student read the directions aloud. Model the dialogue with a student. Say *Imagine you're going to a place that has extreme weather.* Have students complete the sentence: *I'm going to (place).* Ask *What kind of extreme weather does the place have?* Refer students to the list on p. 88. Ask *What are you going to bring?* Have them complete the sentence: *I'm going to bring _____.*

4 **Match the animal.** Find the photo that matches the text.



- This animal has stripes. The stripes tell predators that it is poisonous.
- This animal has spots, which act as camouflage when it hunts other animals.
- This animal copies the color of a leaf. It uses the leaf to hide.

5 **Write. Choose 4 objects from the list.** Write clues for your partner to guess. Use words from the list.

This insect is as green as the leaf it sits on. A katydid

- | | | | | | |
|---------|--------------|----------------|-----------|--------------|---------|
| cat | cheetah | dog | drough | drum | guitar |
| horse | hurricane | katydid | lightning | piano | thunder |
| as...as | not as... as | more (quickly) | than | less (often) | than |

6 **Work with a partner.** Practice and perform a role-play.

Student A:

You think there may be life on other planets.

Student B:

You don't believe there is life on other planets.

- | | | | | | |
|-------------|----------|-----------|--------|------------|----------|
| anyone | everyone | journey | no one | someone | universe |
| communicate | galaxy | may/might | planet | spacecraft | |

I think there may be life on planets in other solar systems.

If you are right, why doesn't anyone from other planets communicate with us?

- Form groups of three. Say *Tell your group members where you're going. They'll ask you a question about what you're going to bring. Answer and then listen as they give you advice on how to plan for the weather.* Have students take turns asking questions and giving advice, using the model dialogue as a guide.

Read 4

- 4 Point to each photo and read the animal names aloud. Ask students to say words that tell about each animal. (frog: stripes, red, bright; katydid: green, looks like a leaf; cheetah: spots, fast, long tail) Say *Let's read sentences about these animals.* Have students match the sentences to the correct animal. If students have difficulty, underline key words in each sentence. For example, in item 2

underline *spots* and ask *Which animal has spots?* (cheetah) Review students' responses.

Write 5

- 5 Encourage students to use as much vocabulary as possible in their four clues and to be creative with their descriptions and comparisons.

Speak 6

- 6 Make sure students understand that they are to say things that support their position even if they don't actually believe it. Guide them by giving a response to the question in the model. Say *Extraterrestrials might live in galaxies that are too far away to communicate.*

Let's Talk

It's my turn.

- I will ...
- take turns.
 - give commands.
 - talk about who won a game.

1 Listen and read. TR: B39

Marco: **Whose turn is it?**
 Amy: It's my turn.
 Marco: Well, **hurry up!**

Amy: Yay, **I won!**
 Marco: Now **we're tied.**
 Amy: **No way.** What do you mean?
 Marco: Well, I won last time!



Whose turn is it? It's my turn. It's his / her turn.	Hurry up! Come on!	I won! We're tied. Sorry, you lost!	No way. That's not true. That's not possible.
---	------------------------------	---	--

2 Work with a partner. Use the chart. Take turns to talk about playing a game.

Objectives

Everyday English: *It's my turn.*

- Students will
- take turns.
 - listen to and give commands.
 - talk about who won a game.

School English: *Who's going to take notes?*

- Students will
- describe a classroom task.
 - make a request.
 - offer to do something.

Content Vocabulary *task, reporter, crossword*

Academic Language *command, request*

Resources Audio CD TR: B39-B41

It's my turn. 1 2

- Say *When we play games, we take turns.* Have a student come to the front of the class. Draw a tic-tac-toe game on the board. Say *It's my turn.* Draw an X in one of the spaces. Then, say to the student *It's your turn.* Have the student draw an O in another space.
- Say *When we play a game, usually someone wins, and someone loses. If nobody wins or loses, the game is tied.* Write on the board *Hurry up!* Say *When we want our partner to take a turn quickly, we say "Hurry up!"*
- 1 Say *Marco and Amy are playing a game. Let's listen to what they say.* Play TR: B39. Have students follow along in their books. After the audio, ask

Who won the game? (Amy) *What did Amy say when she won?* (Yay, I won!)

- 2 Direct students' attention to the chart on p. 90. Explain that the first column shows how to answer the question *Whose turn is it?* Point to the phrase *Come on!* in the second column and say *This is another way to say "Hurry up!"* Point to the third column and say *Use these words when you win or tie a game.* Point to the last column and say *These are more ways to say "No way."*
- Pair students. Say *Play a game of tic-tac-toe. Tell whose turn it is and what happens at the end of the game.* Have students use words from each column in the chart. Walk around the room to monitor students' conversations.

Who's going to take notes?

- I will ...
- talk about a classroom task.
 - make a request.
 - offer to do something.

3 Listen and read. TR: B40

Sonia: So, I'll be the reporter. **Who's going to** take notes?
 Olga: **I'll do that.**
 Sonia: Thanks. **Can you** watch the time, Hans?
 Hans: Sure.
 Hans: Um, **what page are we on?**
 Olga: **We're on page** 25. We're sharing ideas about music.
 Hans: Thanks, Olga.

Who's going to _____ ? Can you _____ ?	I'll do that. I'll (watch the time). I'll be _____ . I can _____ .	What page are we on? Which page is it? How long do we have?	We're on page _____ . We have _____ . We're _____ .
---	--	--	--

4 Listen to two discussions. Circle what the students are doing. TR: B41

1. They are a. doing a role-play. b. doing a crossword. c. preparing a poster.
2. They are a. doing a role-play. b. doing a crossword. c. preparing a poster.

5 Work in groups of three. Prepare and practice discussions.

- Choose one task. Discuss how you are going to do it.
1. Make a musical instrument from recycled objects.
 2. Make a mural about copycat animals.
 3. Make a poster about the weather.

Who's going to take notes? 3 4 5

- Write *Who's going to* _____ ? on the board. Say *This is one way to make a request. When we make a request, we ask someone to do something.* Model a request by turning off the lights. Ask *Who's going to turn the lights on?* Call on a student. Say *(Naoki), can you turn the lights on?* Have the student respond to your request and complete the task. Say *When someone asks us to do something, we can say "I'll do that" or "I can turn the lights on."*
- 3 Say *Let's listen to students talk about doing classroom tasks.* Play TR: B40 as students read along in their books. Then point out the chart on p. 91.
- 4 Say *Now listen to two conversations. What are the people doing? Circle your answer.* Play TR: B41. Play the audio a second time and have students check their answers.
- 5 Have students form groups of three and choose a task from the list. Tell them to think about the following questions as they prepare their discussions: *What materials do you need? Who will get the materials? What are the different parts of the task? Who will do each part?* Remind students to use phrases from the chart on p. 91 in their discussions.

Our World in Context

Chess is one of the most popular board games in the world. In chess, players take turns moving pieces on a board. Players try to capture their opponent's king piece. Chess was created in India in the 6th century CE. Since then it has spread to many countries across the globe. The longest chess game ever recorded was a match between Ivan Nikolic and Goran Arsovic. After 269 moves and more than 20 hours, the game finally ended in a draw, meaning that there was no clear winner or loser!

Teaching Tip

Dividing up tasks is a good way for groups to complete projects and assignments more efficiently. Remind students to take a different task each time that they work in groups. Check to be certain that the same student isn't always assigned a speaking or writing task.

To make sure that all students get the necessary practice, you may wish to assign roles yourself. Mark students' group-work roles and the date on your class roster. Then, refer back to the roster the next time you assign group work to ensure that students are taking on a different task.

Student Book (Review: Units 1-4)

TR: A38 1 Listen. Circle the inventions that you hear.

Host: Welcome everyone to the last part of our school competition. This section is all about inventions. Let's welcome back Anya and Ben, who both have a score of 24 points.

Are you both ready?

Anya / Ben: Yes / Ready.

Host: OK, let's begin. Question number 1: When did we invent the wheel?

Anya: Um, was it about 5,000 years ago?

Host: Correct! That's one point to Anya! You now have a total of 25 points. Now for Question number 2: Who first had the idea for the modern eraser?

Ben: Charles Goodyear had the idea in 1839.

Host: Correct! One point to Ben. It's a tie again! And now for the last question... When did the Wright brothers fly an airplane for the first time?

Anya, you were first. Go ahead.

Anya: The Wright brothers succeeded in 1903.

Host: Yes! That's correct! And Anya wins the competition with 26 points! Thank you, Ben, for taking part. And well done, Anya. You'll compete against another school next month!

TR: A39 2 Listen again. Answer the questions.

Same as TR: A38.

Student Book (Let's Talk: Units 1-4)

TR: A40 1 Listen and read.

Pablo: What's your favorite sport?

Mario: Soccer. I want to be a professional soccer player.

Pablo: Do you?

Mario: Yeah! What about you? What's your favorite sport?

Pablo: I love soccer, too. My dad is taking me to the World Cup!

Mario: Wow. That's so cool!

TR: A41 3 Listen and read.

Antoni: Hey, Martina, what does this mean?

Martina: I don't know. I think it's a kind of weather.

Antoni: Um, I don't think so.

Martina: Why don't you ask the teacher?

Antoni: That's a good idea.

Antoni: Excuse me, Ms. Biga. What does this word mean?

TR: A42 4 Listen. You will hear two discussions. Read each question and circle the answer.

1. Boy 1: Sayeed, how do you spell *creativity*?

Boy 2: No idea. You should ask the teacher.

Boy 1: OK.

Excuse me, Mr. Haddad. How do you spell *creativity*?

2. Girl 1: Hey, Aisha, how do you say *halawà* [hal-eh-wah] in English?

Girl 2: I think it's *dessert*, but I'm not sure.

Girl 1: Um, I don't think so.

Girl 2: Why don't we ask the teacher?

Girl 1: OK.

Excuse me, Mr. Gonzalez. What does *halawà* mean in English?

Student Book (Review: Units 5-8)

TR: B38 1 Carla is doing a survey about music. What are her questions? What do Laura and Andres answer? Complete the chart.

Carla: Hey Laura and Andres. I'm doing a survey. Do you want to participate?

Laura: Sure! What's the survey about?

Carla: It's about music. Here's the first question: What music do you like? Why?

Laura: I like hip-hop because the beat is strong!

Carla: What about you, Andres? What music do you like? Why?

Andres: I really like jazz because I love saxophones.

Carla: OK, question number 2. What music don't you like? Why?

Laura: I don't like pop. Pop songs are silly.

Carla: What about you, Andres? What music don't you like? Why?

Andres: I don't like classical music. I don't like hip-hop either.

Carla: I need just one answer, not two!

Andres: OK, classical music then. My grandmother listens to it all the time!

Carla: Question number 3 now. Do you like to sing? Have you ever sung in public? How many times?

Laura: Yes! I love to sing, but I've never sung in public.

Carla: Andres, how about you?

Andres: I like to sing, but I don't think anyone likes to hear me sing! My dad has a band and I sang with them once. I don't think they liked it!

Carla: Question number 4. What instruments do you play?

Laura: None! But I'd like to play the guitar.

Carla: Andres, what instruments do you play?

Andres: The saxophone, of course. And I can also play the piano.

Student Book (Let's Talk: Units 5-8)

TR: B39 1 Listen and read.

Marco: Whose turn is it?

Amy: It's my turn.

Marco: Well, hurry up!

Amy: Yay, I won!

Marco: Now we're tied.

Amy: No way. What do you mean?

Marco: Well, I won last time!

TR: B40 3 Listen and read.

Sonia: So, I'll be the reporter. Who's going to take notes?

Olga: I'll do that.

Sonia: Thanks. Can you watch the time, Hans?

Hans: Sure. Um, what page are we on?

Olga: We're on page 25. We're sharing ideas about music.

Hans: Thanks, Olga.

TR: B41 4 Listen to two discussions. Circle what the students are doing.

1. Olga: I know. Let's make a poster!

Sonia: That's a good idea. Can I do the art? I love drawing.

Hans: Sure. You're good at art, too. Who's going to write on the poster?

Sonia: Can you do that, Olga?

Olga: OK, no problem. I like writing.

Hans: OK, then I'll tell the class about our poster.

2. Sonia: OK, this is a role-play between two people, a boy and a girl.

Hans: I'll be the boy! Who's going to be the girl?

Sonia: I'll do that. What about you, Olga? What are you going to do?

Olga: Um, I'll watch the time. How long do we have?

Hans: Ten minutes.

Student Book (Review: Units 1-4)

1 SB p. 44

airplane, eraser, wheel

2 SB p. 44

1. Charles Goodyear had the idea for the eraser.
2. Anya's score was 26.
3. Anya will compete against another school next month.

5 SB p. 45

1. a skater 2. a hobby 3. an inventor 4. a dinosaur
5. together 6. toward 7. a solution 8. plastic

Student Book (Let's Talk: Units 1-4)

4 SB p. 47

1. b. spelling 2. c. pronunciation

Student Book (Review: Units 5-8)

1 SB p. 88

1. Questions: What music do you like? Why? Laura: hip-hop; the beat is strong. Andres: jazz; he likes saxophones.
2. Q: What music don't you like? Why? L: pop; the songs are silly. A: classical; his grandmother listens to it all the time.

3. Q: Do you like to sing? Have you ever sung in public? How many times? L: loves to sing; has never sung in public. A: likes to sing; sang with his dad's band once.

4. Q: What instruments do you play? L: none; would like to play guitar. A: saxophone and piano.

4 SB p. 89

1. frog 2. cheetah 3. katydid

Student Book (Let's Talk: Units 5-8)

4 SB p. 91

1. c. preparing a poster. 2. a. doing a role-play.

Unit 1

Wonders of the Sea

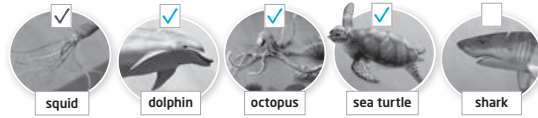
RYLAE L A Y E R
 HALWE W H A L E
 EAS TUTREL S E A T U R T L E
 COPSTUO O C T O P U S
 RSKAH S H A R K
 LIONDHP D O L P H I N
 UQISD S Q U I D
 CEEROSRU R E S O U R C E
 PIEDARSAP D I S A P P E A R

1 Read and write. Do the puzzle. Find the secret message.

disappear sea turtle
 dolphin shark
 layer squid
 octopus whale
 resource

P R O T E C T T H E O C E A N S

2 Listen. Check the sea animals that the girl saw at the aquarium. TR: 2



3 Read and match the questions and answers.

1. What's your favorite sea animal?
 2. What is the smartest animal in the sea?
 3. What sea animal lives where there is very little light?
 4. What could happen if we don't take care of the ocean?
 5. OK. You have chocolate ice cream. What do you want next?
- a. I'd like a layer of bananas with vanilla ice cream on top and some chocolate syrup.
 b. Some sea animals might disappear forever.
 c. The octopus lives in the "twilight" zone.
 d. Many people think it's the dolphin.
 e. I like whales best of all.

4 Read and write.

1. You are swimming in the ocean. You feel lots of arms touching your legs. You count them. There are eight of them. It's an octopus!
2. Clean air and water are the most important resources we have. It's important to protect them.
3. The sea has many different layers. It is very dark and cold at the bottom.
4. You are on a boat. Some dolphins are playing in the water! Suddenly you can't see them anymore. What happened? They disappeared underwater.

5 Think about it. Write.

1. I think the prettiest sea animal is _____. It has _____.
2. I think the ugliest sea animal is _____. It looks _____.
3. I think the ocean is cool because _____.

GRAMMAR

I	will won't	ride	bikes with wings in the future.	'll = will
You		have	bigger heads one day.	
He/She/It		eat	different food one day.	
We		be able to	speak many languages one day.	
They	have to		use clocks in the future.	
People				
Will	we	stop	pollution in the future?	Yes, we will.
	people	have	wings one day?	No, they won't.

11 Read and write.

1. Will people live under the ocean one day. (live under the ocean / one day?)
 Yes, they will. There will be underwater cities.
2. Will children study at school in 10 years. (study at school / 10 years?)
 Answers will vary.
3. Will we go to the movies in the future. (go to the movies / the future?)
 Answers will vary.

12 Listen. What do Ken and Misao think? Check how our lives will be different in 20 years. TR: 3

	Boy	Girl
1. have computers in our bodies	✓	✗
2. live in the same house	✓	✓
3. won't be enough food	✓	✗
4. have water	✓	✗
5. feel sick	✗	✗

13 Listen to the song. Check T for True and F for False. TR: 4

1. We protect the oceans to make a worse world. (T) (F) (✓) (✗)
 2. The sharks want a clean ocean. We do, too. (T) (F) (✓) (✗)
 3. We know all the creatures in the sea. (T) (F) (✓) (✗)
 4. Ocean animals and people share the same world. (T) (F) (✓) (✗)

14 Listen. Write the missing letters that make the same ar sound you hear in the word shark. TR: 5

1. f_ _ar_ _mer
 2. c_ _ar_ _s
 3. sm_ _ar_ _ter
 4. p_ _ar_ _ty
 5. g_ _ar_ _bage
 6. h_ _ar_ _dest



15 Complete the sentences. Use the words from Activity 14.

1. I'm so excited for Pedro's birthday party this weekend!
 2. My little brother loves to play with his toy cars and trucks.
 3. I think science is the hardest subject in school.
 4. My sister loves to grow things. She wants to be a farmer one day.
 5. Do you think your dog would be smarter if it went to school?
 6. Please remember to throw away your garbage after lunch.

GRAMMAR

We **have** to get up early during the week. You **must** brush your teeth in the morning. What **do we have** to do next?
 Don't eat that! It's dirty. You **can't** do that. It's wrong. You **must not** go to bed late. Why **can't** we throw trash in the sea?



6 Look and write. Complete the sentences.

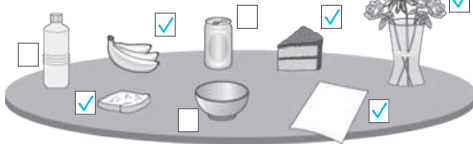
1. You can't swim on this beach.
2. We have to put / must put our bottles in a recycling bin.
3. You can't fish / must not fish here! The waves are dangerous.
4. We have to pick up / must pick up our trash before we go.
5. You can't use / must not use your cell phone here.
6. This is a library. You have to be / must be quiet.

fish be
 pick up use
 put swim

7 What about you? Make four true sentences.

1. I have to get up at six on weekdays.
 2. _____
 3. _____
 4. _____
 5. _____

8 Look and answer. Check all the objects that are biodegradable.



9 Match the questions and answers.

1. Is this bottle of water biodegradable?
 2. People say that there are no fish in this river. Is that true?
 3. Why are our oceans and rivers so dirty?
 4. Ugh! This sand is black, not white. The water is black, too. What happened?
- a. Yes, it is. There is too much pollution. They can't live here anymore.
 b. No, it isn't. It's plastic!
 c. There was a big oil spill last year. We are still cleaning up.
 d. People throw garbage into the rivers. Then the garbage travels to the sea.

10 What about you? What can we do to protect the ocean? Write your ideas. Use four words from each box.

biodegradable plastic clean up stop
 garbage pollution pick up throw
 oil spill put

1. _____
 2. _____
 3. _____
 4. _____
 5. _____

16 Listen and read. TR: 6

Looking for Lunch

A shark can grow and lose 30,000 teeth in a lifetime.

It's another busy day in the ocean. All the sea animals are hungry. A parrotfish eats the soft part of a coral as it swims around. The energy from the food passes from the coral to the fish. It keeps the parrotfish alive, but not for long! A much larger blacktip reef shark swims by and sees the parrotfish. It moves closer. Its sharp teeth cut the parrotfish. Gulp! Energy moves up another link in the food chain. The energy that was in the parrotfish is now in the shark. And that shark or some other fish may end up on your plate for lunch!

Sea creatures—like people—eat more than one thing. And many of these animals fight for the same food. All of the animals and the food they eat connect to form a "food web." In this web of life, energy moves from animal to animal. We are all connected to the ocean.



17 Check T for True and F for False.

1. Sea animals get energy when they eat other animals. (T) (F) (✓) (✗)
 2. Energy moves from strong animals to weak animals. (T) (F) (✓) (✗)
 3. A shark does not get energy from eating a small fish. (T) (F) (✓) (✗)
 4. All sea animals are part of a food web. (T) (F) (✓) (✗)

Paragraphs of Contrast

In a paragraph of contrast, you write about the differences between two things. You can use facts and descriptive words to show differences. You can also use words that show contrast, such as *but* and *however*, and expressions such as *in contrast*.

18 Read. Read about land turtles and sea turtles. How does the writer show differences? Underline the words and expressions.

Land and Sea Turtles

All turtles begin their lives on land. However, baby turtles' lives are very different. Baby land turtles crawl away to live in woods, swamps, grasslands, or deserts. In contrast, baby sea turtles crawl to the ocean to live in the water. Land turtles and sea turtles look different, too. Land turtles have hard, round shells. When they are afraid, they hide in their shells. Sea turtles, however, have soft, flat shells. They can't hide inside them, but they can swim away really fast. When cold weather comes, land turtles dig holes in the ground and sleep all winter. They are too slow to move to warmer places. In contrast, sea turtles simply swim away to find warmer waters.



land turtle

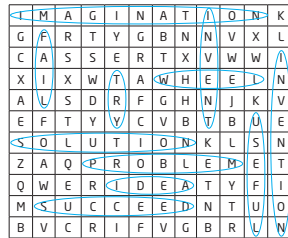


sea turtle

19 Write in your notebook. Write about dolphins and sharks. How are they different? Use words and expressions that show contrast.

Unit 2
Good Idea!

1 Do the puzzle. Circle the words. Then use three of the words to write sentences about the picture.



- fail
- idea
- imagination
- invent
- invention
- problem
- solution
- succeed
- try
- useful
- wheel



Answers will vary.

2 Complete the dialogue.

imagination fail idea invent problem solution try wheels

Rena: I don't want to play video games anymore. Let's invent something!
 Nikos: That's a good idea. But what?
 Rena: Use your imagination. We can think of something. I know. Let's make a robot!
 Nikos: Sure. I don't know how, but let's try.
 Rena: Oh, no. We have a problem. How do we get it to move?
 Nikos: Wait! I have a solution!
 Let's add wheels.
 Rena: Cool. I knew we could do it! If we work together, we can't fail.



3 What about you? Write your answers.

- Think of the inventions you use every day. Which one is the most useful?

- Why is it important to have a good imagination?

- Are you a good friend? What do you do when a friend has a problem?

- What advice do you give a friend who fails at something?

GRAMMAR

What	do	you	do with this?	you = people (in general)
How			use it?	
Why			want to go home?	
When			play this game?	
You	can't be sure about the future. never know what will happen! use this to make phone calls.			

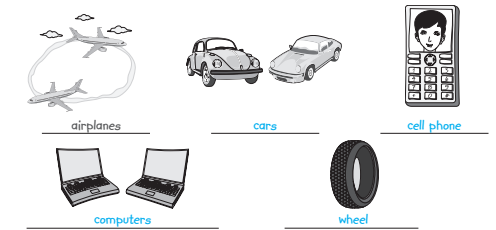
9 Read. Check the sentences that are about *people in general*.

- 1. How do you pronounce *wheel* in English?
- 2. Can you please show me how to use this?
- 3. What do you think is the best invention ever, Ming?
- 4. I don't know how to play bingo. How do you play it?
- 5. Is this a new toy? What do you do with it?

10 Play a game. Listen to the descriptions of inventions. Check the box when you hear the description. Then circle the column that has three check marks in a line. **TR: 8**

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

11 Write and listen. Label the inventions. Then listen and write them in the song. **TR: 9**



Inventions solve problems.

Problems that we used to have are gone!

The wheel and the cell phone help to make our world go around!

Inventions are useful,

every day, in every way.

computers, cars, and airplanes help to make our world go around.

12 Listen. Write the missing letters. Then rewrite the words that have the same beginning *y* sound that you hear in the word *yes*. **TR: 10**

- young
- yesful
- ynder
- yellow
- yesed
- yogurt
- ymbrella
- yawn

young, useful, yellow, used, yogurt, yawn

GRAMMAR

I	used to	talk face-to-face. go to the movies more often.
You		
He / She	didn't use to	have a car.
It		
We / They		live in a house. travel by boat.
Did	use to	play games when you were a kid? use the Internet when they were kids? ride horses?
you		
your parents		
people		

4 Look and write. Complete the sentences and questions.

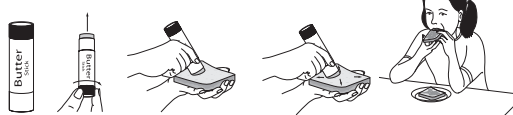
- How did this family use to live (live)?
- These people didn't use to live (not / live) in an apartment. They used to live (live) in a house.
- They didn't use to buy (not / buy) milk. They used to have (have) their own cows.
- This family used to sleep (sleep) on the floor. They didn't use to have (not / have) beds.
- Did these people use to travel (travel) by car? No, they used to walk (walk).



5 Write. Is your family life different from when you were a little kid? How?

We used to live in an apartment when I was five. Now we live in a house.

6 Read. Circle the best word.



- This invention, called a "butter stick," is easy to use! a. use b. move
- First, open the "butter stick." Turn the end. a. Lift b. Turn
- Now put the "stick" on the bread. a. put b. lift
- Then move the "stick" around the bread. a. move b. use
- Put some jelly on the bread. Then turn the bread to your mouth and eat it! Yum! a. turn b. lift

7 Listen. Answer the questions. **TR: 7**

- What does Irma think of this invention?
She thinks it's awesome / cool.
- Why does Daniel think it's silly?
Because you don't need an invention for it. You can use your hand.



8 Listen again. Write the order you hear these sentences (1-6).

- Why don't you just lift the bottle with your hand and give it to me?
- So, I move it across the table to you—like this!
- Well, now you put the sauce on your fries.
- So the wheels turn. And now I have the sauce.
- Really? How do you use it?
- Use your imagination! It's easy!

13 Listen and read. **TR: 11**

Trains Make the World Go 'Round

The original bullet trains, the 0 Series, which stopped running in 2008, made enough trips to circle the earth 30,000 times.

Stand back! The *Shinkansen*, or "bullet train," is coming into the station! These Japanese trains are some of the fastest trains in the world. The journey from Tokyo to Nagano used to take three hours. The bullet train travels at 300 kilometers per hour (186 miles per hour) and takes only 79 minutes! The trains are always on time (although once one was 42 seconds late!), they're comfortable, and they're very quiet. You feel like you aren't moving at all. But don't fall asleep. There is a lot to see. The bullet train travels across 300 bridges, and you can see Mount Fuji out the window.

In fact, trains are popular in many parts of the world—not just Japan. Every day, billions of people in China, India, and Europe travel by train. Trains are the fastest and safest way to travel on land. (Cars and buses are much more dangerous.) Although trains are more expensive than they used to be, they still make the world go 'round!

14 Complete the chart with the opinions about bullet trains.

There is a lot to see. They're comfortable.
 They're always on time. They're very fast.

Opinion	Supporting facts
1. They're very fast.	The trains travel at 300 km/h.
2. They're always on time.	The train was late only once. It was 42 seconds late!
3. They're comfortable.	When you are on the train, you feel like you aren't moving.
4. There is a lot to see.	There are views from hundreds of bridges.

Paragraphs of Fact and Opinion

To introduce opinions, remember to use words like *in my opinion*, *I think*, and *I believe*. A fact is a piece of true information, such as a date, an event, or a name. Use facts to support your opinions.

15 Read. Read these paragraphs of fact and opinion. Underline facts that support the opinions.

A Good Idea

In my opinion, sticky notes are a great invention. They're a really good idea and they're easy to use. You lift the paper off, write a note, and stick it on your notebook or on your computer. And they come off easily. I think most people like them because they are so useful. Before I started to use sticky notes, I used to forget everything! I believe that the story of sticky notes is interesting, too. Sticky notes have two inventors. Spencer Silver invented the glue in 1970. The glue wasn't very strong, so he didn't know how he could use it! Four years later, Arthur Fry found a way to use the glue. One day, all his notes fell on the floor. He wasn't happy! But he remembered Silver's glue! Later, he used the glue on small pieces of paper. It worked! The notes stayed on the paper, and it was easy to remove them. And now we have a cool—and useful—invention!

16 Write in your notebook. Describe an invention. Explain how people use it and why you like it. Include facts to support your opinion.

Unit 3

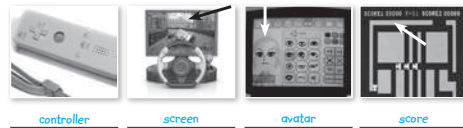
That's Really Interesting!

1 Read and write. Unscramble the words and find the secret message!

LEANO	A L O N E	alone avatar collect compete controller enjoy screen take photos together
REGTOHE	T O G E T H E R	
MEETCPO	C O M P E T E	
SEENRC	S C R E E N	
ROTCNRELO	C O N T R O L L E R	
JYOEN	E N J O Y	
LETCLCO	C O L L E C T	
REOCS	S C O R E	
ETKA TOPSOH	T A K E P H O T O S	
RAAATV	A V A T A R	

WE R E A L L Y E N J O Y L I F E

2 Look and write. Label the pictures. Use words from Activity 1.



3 Read and write. Complete the conversation.

alone controller score together
avatar enjoy screen



Juma: Hey, Omar. My mom gave me a video game console for my birthday. Do you want to play a game together?

Omar: Sure! I really enjoy video games. How do you play?

Juma: It's really easy. First, you choose an avatar. Then you listen to music and move the controller around in the air. You can watch your avatar move on the screen!

Omar: Cool! I like playing with a friend instead of alone.

Juma: Me, too! And each person has a controller, so we can both play at the same time.

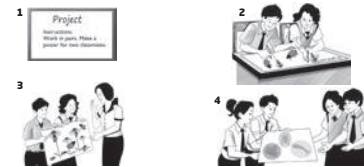
Omar: OK. So do you have to score points?

4 What about you? Write about yourself.

What hobbies do you have? Tell what you like about them.

GRAMMAR

I	gave	me / you	a stuffed toy.	Verbs
You	told	him / her	a story.	give
He	sent	us / them	a comic book.	sell
She				send
We				show
They	gave	a stuffed toy	to	tell
Mariela	told	a story	me / you.	write
	sent	a comic book	him / her.	buy (for)
			us / them.	find (for)
				make (for)



10 Look at pictures 1-4. Underline the correct word.

- Last week we had to make / buy / give a poster for two classmates.
- So we told / made / sold Jaime and Delia a bug poster.
- Later we showed / sold / wrote the teacher our work. She liked it.
- After that, Jaime and Delia sold / told / gave us a fossil poster.

11 Write. Write the sentences from Activity 10 in a different way.

Last week we had to make two classmates a poster.
 So we made a bug poster for Jaime and Delia.
 Later we showed our work to the teacher.
 After that, Jaime and Delia gave a fossil poster to us.

12 Listen to the song. Match the sentence parts. TR. 15

- The boy who has the highest score because I think they're sweet.
- The girl who collects a fossil can see them in her dreams.
- I collect stuffed animals on my new cell phone.
- The boy who takes a photo wins the video game.
- The girl who reads about dinosaurs sees it on the screen.
- I like to talk about my hobby wants to learn its name.

13 Listen and write. Listen to the chorus. Cross out the extra words. Then write your own chorus. TR. 16

What's your favorite hobby? _____

What do you often like to do? _____

What's your friend's hobby? _____

I have a cool hobby, too. _____

14 Listen. Write the missing letters to make a sound like oy in the word enjoy. Then rewrite each word under the correct spelling. TR. 17

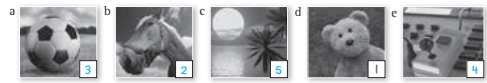
- enj_oy_
- _oi_
- _oy_
- ch_oi_ce
- n_oi_se
- c_oi_n
- b_oy_
- j_oy_

oy	oi
enjoy	noise
toy	oil
boy	choice
joy	coin

GRAMMAR

The person	who	lives opposite my family	likes to take photos.
People		have colds and coughs	should use tissues.
The boy		sits near me in class	collects teddy bears.
A girl		used to study in my school	invents video games now.
A nurse	is someone	who	works in a hospital.
My friend	is a person		likes to compete.

5 Listen. Look at the avatars. Write the number (1-5). TR. 12



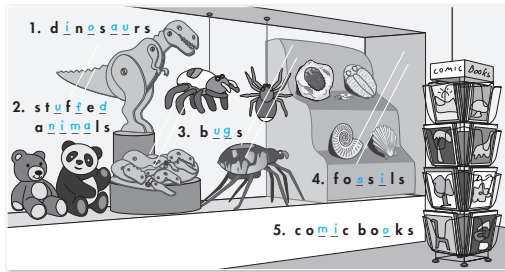
6 Read and write. Read the sentences about pictures a-e. Choose the best expression. Add who.

takes photos
ride horses
loves teddy bears

must have the highest score
enjoy sports

- I like this avatar. It's great for people who enjoy sports.
- This avatar is wonderful for people who ride horses for a hobby.
- This is great for my friend who takes photos. She loves pictures of nature!
- This is a good avatar for my sister. She is a person who loves teddy bears.
- This is a funny avatar for Mario. He is someone who must have the highest score!

7 Look and write. Label the objects in the Science Museum store.



8 Listen. Number the order that Irma talks about these toys (1-5). TR. 13

- 3 bugs 2 dinosaurs 1 stuffed animals
5 comic books 4 fossils

9 Listen again. Underline. TR. 14

- The stuffed animals / bugs are cute, but her brother is a bit old for them.
- Irma thinks that the fossils / dinosaurs are old-fashioned.
- The stuffed animals / bugs move if you put batteries in them.
- The bugs / dinosaurs are good for her brother because he has a good imagination.
- Irma buys the fossils / comic books for her brother because they are the easiest.

15 Listen and read. TR. 18

Video Games: Then and Now



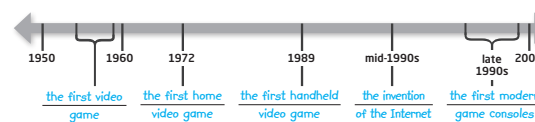
In the late 1950s, a scientist invented the first video game. It was a simple table tennis game. It wasn't until the 1970s that video games became popular. Gamers used to pay to play games that were short and slow. They had to go to video arcades, which were large rooms full of machines. This changed in 1972 with the invention of the first home video game. Gamers could finally play at home! Soon, people wanted to play outside the home, too. The first successful handheld game came out in 1989. After that, people could play games almost everywhere.

The invention of the Internet in the mid-1990s changed gaming forever. Thanks to the Internet, multiplayer games became very popular. Gamers could compete online against people all over the world! Then came the modern game consoles in the late 1990s. Suddenly, video games became popular with everyone. For the first time, people saw video games as more than a hobby. It was a way to learn or become healthy. Even schools and hospitals began to use them! What's next?

16 Read the text again. Check T for True and F for False.

- The interest in video games began in the 1970s. (F)
- Arcades were large rooms where you could play soccer games. (T)
- People wanted to be able to play video games everywhere. (F)
- Video games are still just a hobby. (T)

17 Read. Write the inventions on the timeline.



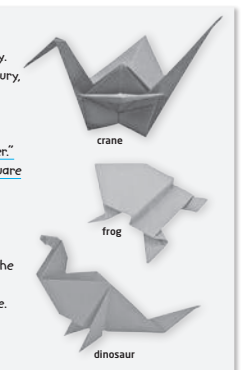
Paragraphs of Explanation

In a paragraph of explanation, you describe something in general. You explain what it is and how you do it. You can explain difficult words and give examples. Use words and expressions like *for example* and *such as*.

18 Read. Read this paragraph of explanation. Underline definitions and examples.

Fun with Paper

Origami is a very popular hobby today. The Japanese invented it in the 17th century, and now it is famous everywhere in the world. The word "origami" comes from two Japanese words: "ori," which means "folding," and "kami," which means "paper." In origami, you always begin with one square sheet of paper. Then you fold the paper many times to make a shape. You can make very simple shapes, such as a little bug. To make a difficult shape, for example, a dragon, you have to fold the paper many times in different ways. The most famous origami design is the crane. Origami can be more difficult than you think, but it's fun!

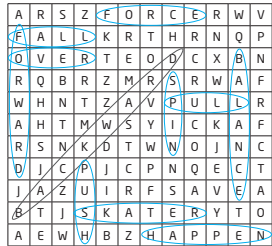


19 Write in your notebook. Describe a hobby. Explain what it is and how you do it.

Unit 4

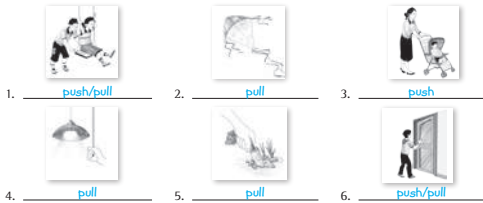
The Science of Fun

1 Do the puzzle.



- backward over
- balance pull
- fall push
- force skater
- forward spin
- happen

2 Look and write. Label the pictures "push" or "pull." Some pictures can have both words.



3 Read. Complete the paragraphs. Can you guess who is speaking? Underline.

backward balance fall over force forward happens push spin

A. "I use force to move. I push on the pedals. The wheels spin and I move. To stop, I use the brakes. The brakes grab the wheels. They stop turning, and I stop moving. I can only move forward, though. I can't move backward. If that happens, I might fall over.
Who am I? I'm a cyclist / car driver / skateboarder.

B. "To move, I push on the ground. The push moves me forward. The wheels turn, and I move. Sometimes I go fast, but I don't fall over. I know how to balance. I stand, bend my knees a little, and hold out my arms.
Who am I? I'm a cyclist / car driver / skateboarder.

4 Write. Choose a picture. Describe how the people move.



GRAMMAR

It is something
A swing is a thing
The force
They are animals

which

you can play at home with a controller.
we push in the playground.
pulls you toward the center of the earth is called gravity.
some people collect. They're bugs!

10 Listen and write. Write the clues you hear in the quiz. Then listen again and write the correct answers. 18: 21



Clues

- It's a useful subject which we study in school.
- It's something which you drink when you have a cough.
- It's a vegetable which we grow in our garden.

Answers

- English
- medicine
- lettuce

11 Write clues. Then guess two possible answers.

- This / a machine with wheels / ride in the park.
This is a machine with wheels which you ride in the park. a bicycle
a skateboard
- It / something / pull.
It is something which you pull.
- This / a popular sport / play / with a ball.
This is a popular sport which you play with a ball.
- This / an invention / changed our lives.
This is an invention which changed our lives.
- It / a thing / people / collect as a hobby.
It is a thing which people collect as a hobby.

12 Listen and write the rhyming pairs in the song. 18: 22

Push it! Pull it! Push it! Pull it! Push! Pull! Push! Pull! Watch it go!

If you spin around, and around and around and around,
what you feel is force.
If you fall down, down, down, down, down to the ground,
that's gravity, of course.

I'm on the move.
I'm in the groove.
It's amazing what you can do
when you let force do the work for you!

The more you push, the faster some things go.
When you spin around, the force comes and goes.

13 Listen. Write the missing letters that sound like the u in put. Then organize the words according to spelling. 18: 23

- p_ u _ t
- f_ oo _ t
- p_ u _ ll
- w_ ou _ ld
- b_ oo _ k
- b_ u _ sh
- c_ oo _ kie
- octop_ u _ s

oo	u	ou
foot	put	would
book	pull	
cookie	bush	
	octopus	

GRAMMAR

The more / less	you do now, we study,	the more / less	you have to do later! we learn.
The faster earlier harder more / less	you walk, I go to bed, you study, we do sports,	the sooner less tired better / worse healthier	you will arrive. I feel the next day. your grades will be. we feel.

5 Read. Match the sentence parts.

- You should work hard in school because b.
- It is important to brush your teeth because e.
- We give plants water and sunlight because d.
- We should try again if we fail because a.
- You must not pollute the ocean because c.

- the harder we try, the more we succeed.
- the harder you study, the more you learn.
- the dirtier it gets, the faster sea animals disappear.
- the more they get, the healthier they will be.
- the better you look after them, the less you have to see the dentist.

6 Complete the sentences.

To start the merry-go-round, a boy pushes it. It starts to turn. What happens?

- The more he pushes it (he / push / it), the faster it turns (fast / it / turn).
- The faster it goes (fast / it / go), the more the children laugh (the children / laugh).
- The funnier it is (funny / it / is), the harder he pushes it (hard / he / push / it).
- The quicker it spins (quick / it / spin), the dizzier they feel (dizzy / they / feel).



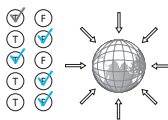
7 Read. Read the clues and write the answer.

away from lean direction toward

- You're in the park. Some bugs are moving near the tree. Suddenly, you can't see them anymore. They disappeared. Which direction did they go in? Up the tree!
- You feel sad. You're going to an adventure camp for two weeks. You won't be with your family. You'll be away from your friends, too. ☹️
- You're asleep and dreaming. In your dream, there is a big monster with two green heads. You're very scared because it is coming toward you!
- You're at the pool for your first swimming lesson. Don't lean over the deep end, you might fall in!

8 Listen and look. Check T for True or F for False. 18: 19

- Gravity is a force. T
- Gravity pulls things down. T
- Gravity pulls things toward the center of the earth. T
- Gravity pushes the sun away from us. T
- Ming thinks gravity is boring. F



9 Listen again. Complete the dialogue. 18: 20

Ming: Mrs. Li, can you please explain something?
Mrs. Li: Sure. How can I help you, Ming?
Ming: I still don't understand gravity.
Mrs. Li: OK, when you fall over, what happens? You fall down on the ground. That's the force of gravity pulling you.
Ming: So gravity pulls everything down, right?
Mrs. Li: Gravity doesn't pull things down. Gravity doesn't pull the sun down to the earth, for example! So, what does gravity do?
Ming: Does it pull things toward the earth?
Mrs. Li: Yes, that's right, Ming! So if you fall over, gravity pulls you toward the center of the earth.

14 Listen and read. 18: 24

The Science of Skateboarding

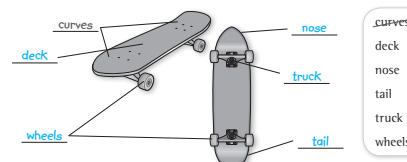
Skateboards are much more than just four wheels and a piece of wood. There are three important parts of the skateboard: the deck, the truck, and the wheels.

The deck is the board. It is usually made of strong wood that can also bend. Skateboard decks have curves at the "nose" (the front) and the "tail" (the back). After you push and the wheels start turning, you should put your feet near the curves. They help you balance. The truck, connected to the wheels and the deck, helps you control the direction. When you lean right, the truck makes the deck turn right. When you lean left, the skateboard turns left. What about the wheels? The wheels move the board forward and backward. They also control the speed.

If you want to have fun, check that all three parts work before you go skateboarding. And don't forget your helmet, knee pads, and elbow pads!

A dog called Tillman can skateboard. He moves 100 meters (328 feet) in just 19.68 seconds and always chews the tires before he begins.

15 Read and write. Label the parts of a skateboard.



Paragraphs of Cause and Effect

In a paragraph of cause and effect, you describe actions and tell why they happened. You also describe the effect of the action. To show effect, you use words like so, so that, and as a result.

16 Read. How does the writer describe cause and effect? Underline the words and phrases.

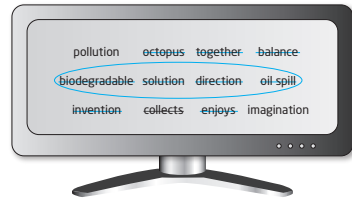
Last week, I learned how to play tetherball with my brother. It's cool. Two people play the game. One person hits the ball to the right. The other person hits it to the left. The ball is connected to a rope so that it doesn't fly away. To win, you have to hit the ball so that it turns around and around the pole! Tetherball looks easy, but it isn't. Every time I hit the ball, it flew up in a big circle. So it was easy for my brother to hit it! My brother is better than I am. First he hit the ball, and then he pushed it with his hands. When he hit the ball, it went around the pole. As a result, he won every game! I want to play again soon, but not with my brother!



17 Write in your notebook. Describe a game or an activity. Include words of cause and effect.

Review

1 Play a game. Complete the sentences and cross out the words on the TV. Circle the line that has four crossed-out words.



- My little brother collects interesting rocks he finds outside. He has three boxes full of them!
- Do you want to go to the mall together this weekend? It's more fun with a friend.
- An oil spill is an accident that makes the water black and sticky.
- Food is biodegradable because it breaks up in the ocean. Plastic is not.
- An octopus is an amazing sea animal with eight arms.
- On the weekend, my dad enjoys watching TV and relaxing.
- The hardest part of riding a bicycle is learning to balance on two wheels.
- I think I've found the solution to our problem! We need more practice!
- Excuse me, which direction is the museum, right or left?
- I think the lightbulb was the most important invention of all time.

36

2 Read and match the sentences.

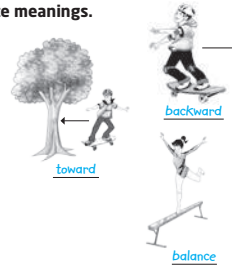
- We have to keep the oceans clean.
- Can you help? You push hard.
- The best inventions are useful.
- I used to play soccer to compete.
- Don't spin around so fast.
- I tried to pull my dog forward.
- He just wanted to go backward.
- Water is a valuable resource.
- Now I play to spend time with my friends.
- They help solve problems.
- I will pull at the same time.
- You will fall over.

3 Read. Underline the correct word to complete each sentence.

- You **can't / must** use tissues! You **must / must not** give germs to your friends.
- She **can't / should** play soccer this afternoon because she **can't / has to** do her homework.
- He **will / won't** go to the dentist after school. He **will / must not** eat candy today.
- The doctor said she **must not / has to** rest. She **should / can't** stay home from school today.
- He **should / shouldn't** put a bandage on his cut. Then he **can / can't** go to school.
- She **has to / shouldn't** get up right now, but she **will / won't** feel better soon.

4 Match the words with opposite meanings. Then label the pictures.

- together
- pull
- fail
- forward
- problem
- toward
- balance
- backward
- away from
- alone
- push
- solution
- fall over
- succeed



37

5 Read. Complete the text. Use words from the box.

must must not should shouldn't will won't

We should / must protect the ocean. It's very important. If we don't protect the ocean now, our resources will disappear in the future. There are many things you can do to help! For example, if you go to the beach, pick up your garbage. You shouldn't / must not leave it on the beach. If you go on a boat, you should / must never put trash in the water because it will pollute the ocean. The worst thing of all is plastic because it isn't biodegradable. So you shouldn't / must not throw plastic bags in the water! Finally, you should / must not buy things made of coral or sea turtle shells. One day, there won't be any coral or sea turtles in the ocean. ☹️



6 Read and write. Underline the correct word. Then write examples.

- Name an invention who / which is useful:
The electric light is useful.
- Write two things who / which have wheels:

- Write a hobby who / which you used to have:

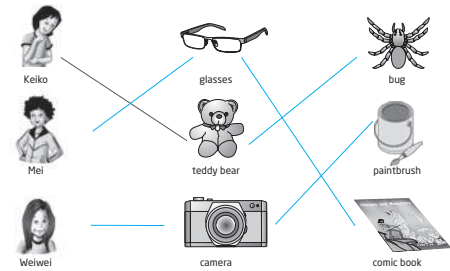
- Name a friend or classmate who / which has a good imagination:

- Write two school subjects who / which you enjoy:

- Name a singer who / which is popular with your friends:

38

7 Read and match. Draw lines to the correct pictures.



- Keiko is the girl who collects stuffed animals.
- The girl who wears glasses is called Mei.
- My friend Weiwei is the girl who takes photos.
- The girl who wears glasses loves to read comic books.
- The girl who collects stuffed animals also collects bugs!
- The girl who takes photos is very creative. She really enjoys art.

8 Read and write. Finish each sentence. Use some words from the box.

better do faster feel higher learn
look more pull push sicker worse

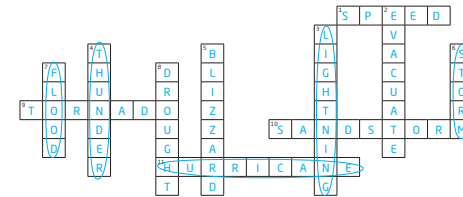
- The more I study, _____.
- The less I sleep, _____.
- The harder I try, _____.
- The worse I feel, _____.

39

Unit 5

Extreme Weather

1 Read and write. Do the Extreme Puzzle!



Across

- How fast?
- Storm with strong twisting winds
- Strong winds blowing in a desert
- Bad storm with very fast, dangerous winds

Down

- To leave someplace during an emergency
- Can make night look like day
- Loud noise from a storm
- Snow falling hard
- Weather with rain, thunder, and lightning
- Too much water
- Too little rain

40

2 Listen and circle. Listen for the puzzle words. Circle them on the puzzle in Activity 1. 1-25



3 Unscramble the words.

- morst storm
- dolfo flood
- ughdrot drought
- natdoor tornado
- dazilbrz blizzard
- tansmords sandstorm

4 Read and write. Use the words from Activity 3 to complete the sentences.

- The water in the lake was low because of the drought.
- The winds from the tornado lifted a car and moved it 30 meters (98 feet)!
- A hurricane is a storm with strong winds and rain.
- When it is windy in a desert, there can be a sandstorm.
- When there's a flood, you need to get to higher ground.
- In a really bad blizzard, sometimes all you can see is white!

41

GRAMMAR

Is it **going to** be sunny tomorrow? No, it's **going to** rain. He's **going to** stay home because of the storm. I'm **going to** wear rain boots! They say it's **going to** rain a lot!

5 Write. What are they going to do on a rainy Saturday?

- Mario / walk / in the rain Mario's going to walk in the rain.
- Pedro / read / newspaper Pedro's going to read the newspaper.
- I / write / story I'm going to write a story.
- Marta and Carla / listen / radio Marta and Carla are going to listen to the radio.
- Pablo / sleep Pablo's going to sleep.

6 Answer the questions using the given word.

- What's the weather going to be like tomorrow? (*storm*)
Tomorrow there's going to be a storm.
- What's going to happen if it rains for another day? (*flood*)
There's going to be a flood.
- What are you going to do if there's a drought? (*water*)
I'm going to use less water. / I'm going to save water.
- When she sees lightning, what is she going to hear soon after? (*thunder*)
She's going to hear thunder soon after.
- It's going to snow. What is he going to do? (*boots*)
He's going to wear boots.

42

7 Read and check.

What is it?	a plan	a shelter	an emergency
1. A hurricane arrives, and the streets are flooding.			✓
2. The winds are strong, and trees are falling.			✓
3. Get fresh water and other supplies.	✓		
4. You can go there if there is a hurricane.		✓	
5. Have a radio nearby at all times.	✓		

8 Complete the sentences. Use words from the box. Some words may be used more than once.

emergency flashlight plan shelter supplies

- I'm going to take this flashlight with me to a(n) shelter.
- You need a(n) plan, so you know what to do in extreme weather.
- In a(n) emergency, you will need supplies like food and water.
- This is a(n) emergency, and everyone must evacuate to a(n) shelter.
- My plan is to keep a(n) flashlight with my supplies.



43

GRAMMAR

If	I	give you a pen,	you	can write sentences.
the weather	is bad,	is bad,	I	stay home.
there	is a blizzard,	(then)	school	closes early.
we	forget an umbrella,	it	always	rains.

School closes early if there is a blizzard. It always rains if I forget an umbrella.

9 Write what you see. Sample answers shown.



- If she sees a stop sign, she stops her bike.
- If he sees that it is raining, he puts on a raincoat.
- If we have to take the bus, we stand at the bus stop.
- If there's a bad storm, we use a flashlight.
- If there's an emergency, I make a plan.
- If it's cold outside, you don't go swimming.

10 Listen, look, and write. Use verses from the song. 11: 26

There's bad weather on the way!
There's bad weather on the way!
Is it going to storm? Yes, it is!
Is there going to be lightning? Yes, there is!
Is there going to be thunder? Yes, there is!

When there's going to be a storm,
I hurry inside!
Be prepared for emergencies.
It's always good to be safe. You'll see!
Grab supplies and a flashlight, too.
Seek shelter. It's the safe thing to do!



Is it going to storm? Yes, it is!
Grab supplies and a flashlight, too.
Is there going to be thunder? Yes, there is!



Seek shelter. It's the safe thing to do! / When there's going to be a storm, I hurry inside!
Is there going to be lightning? Yes, there is!

11 Listen. If the letters **th** make the sound **th** you hear in the word **this**, circle the word. If they make the sound **th** that you hear in **thing**, underline the word. 11: 27

- (this) thing weather thunder
three there birthday brother
teeth breathe they thirsty

Unit 6

Copycat Animals

1 Do the puzzle. Circle the hidden words.



- poisonous
- predator
- species
- camouflage
- copies
- hunt
- prey
- insect
- stripes
- spots

2 Read and write. Use words from the puzzle.

- It's hard to see some animals because of the marks on their bodies. The spots on some animals can be used as camouflage.
- A/an predator uses camouflage so it doesn't scare its prey when it's time to hunt.
- Some animals use color so other animals can't see them. A/an insect that is green is safe on a leaf.

3 Match and make sentences.

- Some harmless insects have colors that look like eyes.
- A frog has two spots on its back that can run away when scared.
- The tiger has stripes on its body that help to camouflage it in a jungle.
- Predators try not to be seen when they hunt prey that are the same as poisonous species.

4 Listen for the puzzle words. Write the matching words under the photos. 11: 29



insect camouflage rabbit prey tiger predator, stripes



butterfly spots spider species, poisonous

5 Make sentences. Use at least two of these words in each sentence.

- camouflage copy hunt insect poisonous predator prey species
- Answers will vary.
 -
 -

12 Listen and read. 11: 28

Weather Change

Did you know that there is more extreme weather now than in the past? According to many scientists, this change started when people began to burn coal, oil, and gas.

The average temperature on Earth is rising. Droughts last longer and are hotter. Ice on mountains melts faster and makes the sea level rise. Some places have less rain, and other places have more rain and floods. In most places, there are more, and stronger, storms. Warmer sea temperatures also make hurricanes stronger.

What can we do to slow weather change? We can make factories and cars more efficient. We can burn less coal, oil, and gas. We can build stronger houses in safer areas. And we can use less energy.

How can we prepare for extreme weather? We should have a plan and supplies for emergencies. And people who live in areas that can flood or have hurricanes should evacuate in an emergency.



The coldest temperature ever recorded on Earth was -89.2°C (-129°F) at Vostok, Antarctica, on July 21, 1983.

13 Think about it. Write what you learned from the text.

What did you know?

What did you learn?

What do you want to know?

Personal Narrative

A personal narrative tells a story. It describes something that really happened. A good writer describes details using the senses—sight, sound, taste, smell, and touch. Readers should feel like they were really there. You can use words like *after*, *before*, *next*, and *then* to show the sequence of events.

14 Read. Circle words that relate to senses and emotions. Underline words that show the sequence of events.

Safe not Sorry!

Last year, the weather forecaster told us that a hurricane was coming. A hurricane is always scary, but a little exciting, too. When a hurricane comes, we know what to do. We have a family plan. First, I had to help my dad put heavy wood over the windows. It was hard work.

When the hurricane came, we could hear the strong winds outside. We could hear the rain coming down hard. Then suddenly we heard a really loud noise.

And then something hit our house really hard! Everyone was worried. What could it be? After the storm, we walked outside. Part of a tree hit the wood on the window. I am so happy we covered the windows! Next time, I won't say the wood is too heavy.



15 Write in your notebook. Write about an extreme weather experience. Give details using the senses. Help the reader feel what you felt.

GRAMMAR

A fox can run as fast as a rabbit.
The stripes of some frogs are as colorful as a flower.
A three-striped frog is as poisonous as a snake.
The spots of a leopard are as black as the night.

6 Complete the sentences.

- cute dangerous fast green soft
- A predator must be as fast as its prey.
 - Some insects can be as green as a leaf.
 - The bite of a spider can be as dangerous as the bite of a snake.
 - The fur of a fox is as soft as a cat's fur.
 - I think a baby deer is as cute as a puppy.



7 Write. Make sentences.

- the walk of a duck / funny / a turtle's walk
The walk of a duck is as funny as a turtle's walk.
- the wool of an alpaca / soft / a sheep's wool
The wool of an alpaca is as soft as a sheep's wool.
- jaguar / dangerous / a cougar
A jaguar is as dangerous as a cougar.
- predator / can be / camouflaged / its prey
A predator can be as camouflaged as its prey.
- a bee sting / painful / a wasp sting
A bee sting is as painful as a wasp sting.

8 Complete the sentences. Then write a new sentence about the pictures. Use different words from the box.

attack defend escape hide



- A bird goes under water to escape an attacking predator. The bird hides from the predator in the water.
- Lions attack a buffalo.



- A penguin turns to defend its nest from a seal.
- A baby deer lies in the grass to hide from predators.

GRAMMAR

The spot on that fish **looks** like an eye, **doesn't it?**
 That deer **will** run into the forest, **won't it?**
 These butterflies **are** beautiful, **aren't they?**
 The coyotes **were** running fast, **weren't they?**
 The sting of a bee **can** hurt, **can't it?**

The spot on that fish **doesn't** look much like an eye, **does it?**
 That deer **won't** run into the forest, **will it?**
 These butterflies **aren't** very beautiful, **are they?**
 The coyotes **were'n't** running very fast, **were they?**
 The sting of a bee **can't** hurt much, **can it?**

9 Read and write.

- The colors are so beautiful, aren't they?
- The spots on the wings look like eyes, don't they?
- That butterfly doesn't taste bad to predators, does it?
- That penguin can't fly, can it?
- That's a better way of finding the answer to my question, isn't it?

10 Listen and say. Finish the questions. TR: 30

- is it _____? 5. don't they _____?
- can't they _____? 6. will we _____?
- doesn't it _____? 7. wasn't it _____?
- do you _____? 8. does she _____?

11 Listen again. Check your answers to Activity 10. TR: 31

12 Listen and write. Choose sentences from the song for each picture. TR: 32



- Predators are everywhere, and looking for a feast!
- A pretty frog can be as deadly as a snake.
- An insect that looks like a leaf copies plants to get relief./Camouflage and imitate./ Resemble and escape!
- Animals hide in front of our eyes, every day./Camouflage and imitate./ Resemble and escape!

13 Listen and look. Circle the letter or letters that make the same sound as the **z** in **zebra**. TR: 33

gzebra poisonous tze closet
 puzzle zoo noze surprze
 chzese exzercise mzuseum dzert

14 Listen and read. TR: 34

Why Do Mockingbirds Copy?



Mockingbirds live in North and South America. They are very good copycats. They imitate other birds and other animals. They can even copy the sounds of a piano or car alarm! Some mockingbirds can learn more than 200 different songs.

Males are loud singers who can sing many songs. They sing when they want to meet females. The singing attracts females. But it also keeps away other males. The longer a mockingbird lives, the more songs it knows. A female mockingbird is attracted to a male who has lived a long time.

Female mockingbirds sing softly and less often than males. They usually sing at their nests in the winter to keep away other birds. When another bird comes near, the female makes a loud noise to scare it away.

Mockingbirds are one of the most amazing animals in the world!

15 Check what you learned from the text.

Mockingbird facts	Male	Female
1. Live in South America	✓	✓
2. Imitate other birds	✓	✓
3. Are loud singers	✓	
4. Sing to attract	✓	
5. Sing to keep away other birds	✓	✓

Paragraphs of Classification

A paragraph of classification describes features that members of a group share. You can define, compare, and contrast details to show how things belong to a group or class. You can use words such as *both*, *each of*, *like*, *but*, and *unlike*.

16 Read. Underline the words and expressions that describe the animals.

One or Two Ways to Imitate

Some animals copy other animals to escape predators. They copy the things that predators don't like, such as bad taste or a dangerous sting. Some species copy the appearance of another animal, but not other characteristics. For example, the viceroy butterfly and the soldier butterfly look like each other. They also both taste bad to predators. This type of animal can copy, or imitate, in two ways. The ash borer moth looks like a wasp, but it doesn't have a stinger. Predators stay away from it, but it can't sting them. The ash borer moth belongs to the class of animal that only copies appearance.



viceroy butterfly



ash borer moth

17 Write in your notebook. Write about animals that belong to a certain group. Describe the features that they share.

Unit 7

Music in Our World

1 Look and listen. Write the words that you hear. TR: 35

band beat concert drum flute guitar
 lead singer piano practice saxophone violin

1. practice
 2. band
 3. violin
 concert
 4. drum
 beat
 5. piano
 6. saxophone
 7. lead singer
 8. guitar

2 Unscramble and write.

Mei is the *dlac nreysi* lead singer in a *danb* band. There are four other musicians who play with her. Feng plays the *murd* drum. He makes the *thae* beat for the group. Xui Li plays the *rtaugi* guitar, and Ting plays the *hoopnase* saxophone. Xu Guan plays the *opnai* piano, the *tulle* flute, and the *oliivn* violin! The music sounds great because they *tarpcie* practice a lot! They're playing at a *ecctnor* concert today.

3 Read the words in the box. Write the words in the correct column.

beat concert drum flute guitar lead singer piano saxophone violin

Instruments	Other Words About Music
drum	beat
flute	concert
guitar	lead singer
piano	
saxophone	
violin	

4 Underline the best answer.

- a group that plays music together (band / concert)
- play an instrument to get better at it (beat / practice)
- a thing used to make music (lead singer / instrument)
- a person who uses his or her voice to make music (lead singer / instrument)
- an instrument that is long and thin (piano / flute)

14 Listen and read. TR: 34

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Males are loud singers who can sing many songs. They sing when they want to meet females. The singing attracts females. But it also keeps away other males. The longer a mockingbird lives, the more songs it knows. A female mockingbird is attracted to a male who has lived a long time.

Female mockingbirds sing softly and less often than males. They usually sing at their nests in the winter to keep away other birds. When another bird comes near, the female makes a loud noise to scare it away.

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15 Check what you learned from the text.

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viceroy butterfly



ash borer moth

17 Write in your notebook. Write about animals that belong to a certain group. Describe the features that they share.

GRAMMAR

Has	she	ever	played	the piano?
Have	you	ever	sung	a pop song?
I	have	never	sung	a hip-hop song.
She	has	never	played	the guitar.

5 Read and write.

- Have we ever been there?
No, we have never been there.
- Has she ever listened to a flute?
No, she has never listened to a flute.
- Has he ever played the guitar?
No, he has never played the guitar.
- Have you ever been to a concert?
No, I have never been to a concert.
- Have they ever practiced together?
No, they have never practiced together.

GRAMMAR

This is the first time she has ever played the piano.

6 Read and write. Write your own sentences.

- This is the first time my teacher _____.
- It's the only time I _____.
- That's the first time my friends _____.
- This is the only time my brother _____.

7 Look and match. Write the name of the type of music. Then write the name of a performer you know in each column.

classical hip-hop jazz pop rock

1. hip-hop

2. jazz

3. rock

4. classical

5. pop

hip-hop	classical	rock	jazz	pop

8 Listen. Number the music styles in the order you hear them. TR: 36

3 classical 2 hip-hop 6 jazz 1 pop 4 rock

GRAMMAR

You broke a string! You should play **more carefully!** (+)
 Can you play that song **more slowly?** (+)
 I play jazz **better than** my brother does. (+)
 He plays the guitar **less often than** he plays the piano. (-)
 Ines can sing **as well as** Marison can. (=)
 Mario doesn't sing **as beautifully as** his brother. (=)

well → **better** slowly → **more/less slowly**
 badly → **worse** frequently → **more/less frequently**
 fast → **faster/less fast**

9 Complete the sentences.

- He can perform as well as the other musicians if he practices. (=, well)
- She plays classical music less often than pop music. (-, often)
- He plays the violin better than he plays other string instruments. (+, well)
- He moves his right hand faster than his left hand. (+, fast)

10 Read and write. Write sentences using comparisons.

- Hsin plays the piano well. Hua plays the piano better.
Hua plays the piano better than Hsin.
- He practices the first song often. He practices the last song less often.
He practices the first song more often than the last song. / He practices the last song less often than the first song.
- We can sing well. They can sing well.
We can sing as well as they can sing. / They can sing as well as we can sing.
- I like to listen to rock music. I like to listen to hip-hop music a little less.
I like to listen to rock music more than hip-hop music. / I like to listen to hip-hop music less than rock music.
- Pang goes to concerts two times per year. Ming goes to concerts three times per year.
Pang goes to concerts less often than Ming does. / Ming goes to concerts more often than Pang does.

11 Listen to the song. Answer the questions. *TR: 37*

- Have you ever listened to hip-hop?
No, I haven't.
- Have you ever listened to drums?
Yes, I have. / No, I haven't.
- I can hear the guitar. Can you?
Yes, I can. / No, I can't.



12 Read and write. Write a new verse for the song.

The flute is playing. The _____ is playing.
 The piano is, too. The _____ is, too.
 I can hear the guitar. I can hear the _____
 Can you? Can you?

13 Listen. Write the missing letter. Then think of more words that have the same sound of **o** that you hear in **concert**. *TR: 38*

- concert
- pop
- rock
- spots
- copy



Unit 8

Life Out There

1 Do a puzzle. Read the clues. Fill in the words.

comet
 extraterrestrials
 galaxy
 journey
 orbit
 planet
 search
 solar system
 space
 universe

Across

- Scientists use satellite dishes to _____ for signs of life beyond Earth.
- Mars travels in a(n) _____ around the Sun.
- We sent rockets into _____.
- Earth is the third _____ from the Sun.
- The _____ is made of space and all the stars.

Down

- If _____ exist, they live in other places beyond Earth.
- A(n) _____ is a trip from one place to another.
- A(n) _____ is made up of a sun and the planets that go around it.
- A big group of stars is known as a(n) _____.
- A(n) _____ is a moving cloud of rock, ice, and gas.

2 Complete the sentences.

extraterrestrials orbit solar system
 galaxy journey search

- Venus is a planet in our solar system.
- Venus travels around the Sun in a closer orbit than Earth.
- Would you like to go on a(n) journey to another planet?
- Scientists continue to search outer space for signs of life.
- Do you think extraterrestrials can live on Venus?
- If not on Venus, perhaps they can live on some other far away planet in the galaxy.

3 Read and write. Answer the questions.

- How can you describe ...
- an extraterrestrial? _____
 - an orbit? _____
 - the universe? _____

14 Listen and read. *TR: 39*

It's All Music

The oldest instrument ever found is more than 35,000 years old! It's a flute. Instruments of this type are called wind instruments because the music comes from moving air. Each instrument has a shape that makes its sound different. Some wind instruments have holes for fingers. Others have buttons to press. Holes and buttons let you change the way the air travels.



Another way to make music is with strings. When you slide a finger over a string or pluck it, it makes music. Thick, thin, long, and short strings all make different notes. Musicians use a bow to play some string instruments. The bow is a piece of wood with hairs or a string stretched between its ends. You can also make music by hitting or shaking something that makes a sound. Percussion instruments can be made from many things. That's because most things make a sound when you hit them. A drum is a percussion instrument. A piano is a percussion instrument, too. When piano keys are pressed, hammers inside the piano hit the strings to make music.

15 Match the instruments and their types. Check the correct column.

	Wind	String	Percussion
Drum			✓
Flute	✓		
Guitar		✓	
Piano			✓
Saxophone	✓		
Violin		✓	



Mozart composed his first song when he was four years old.

Paragraphs of Contrast

Paragraphs of contrast show the differences between things. You can use facts and descriptive details to contrast different features. You can also use words like *but, although, unlike, while, instead, and in contrast* to show things that are not the same.

16 Read. Underline the words used to show differences.

Composing, Then and Now

In the past, composers traditionally created their music with paper and pen. But now, technology—such as computer and phone apps—is changing how music is made. Although some composers still write by hand, more and more are using these new tools. Before, a composer would write notes on lined measures of music. In contrast, apps let the composer hum a song, and then the apps write the musical notes! Many people think that composing music was more difficult in the past. When composers wanted to make changes as they wrote, they had to stop and erase notes. It was a messy, slow process. Some new apps, unlike old erasers, make correction easy. These apps can show music as a moving stream of color. To make changes, the composer can pull and twist music with his or her fingers on the screen. While a traditional composer is busy cleaning ink off fingers, a modern composer can write more songs instead!



17 Write in your notebook. Write about two styles of music or two musical instruments. How are they different? Use words and expressions that show contrast.

GRAMMAR

We **may** travel to another solar system. We **might** travel to another solar system.
 Some people think a planet **may** orbit that star. A planet **might** orbit that star, so say.
 I think it **may** be a comet. I thought it **might** be a comet.
 She **knows** that planets **may** orbit that star. She **knew** that planets **might** orbit that star.

4 Write sentences that say you're not sure.

- We have a test tomorrow. We may/might have a test tomorrow.
- That star has planets. That star may/might have planets.
- The universe is bigger than you think. The universe may/might be bigger than you think.
- The comet's orbit goes outside the solar system. The comet's orbit may/might go outside the solar system.
- That planet has extraterrestrials. That planet may/might have extraterrestrials.

5 Read and write. Use the word(s) in parentheses to finish each sentence.

- We heard that extraterrestrials (live) might live on other planets.
- I see that a planet (be next to) may/might be next to ...
- He knows that a comet (fly across) may/might fly across ...
- She thought that the TV show (end) might end ...
- I think that the problem (not be) may/might not be ...

6 Read and look. Match each picture with a sentence.

- The rocket fires and lifts the spacecraft away from Earth.
- The astronaut searches her instruments.
- An astronaut at the space station communicates with scientists.



7 Read and write.

- astronaut communicate rocket spacecraft space station
- A rocket makes a loud noise when it lifts off.
 - You communicate when you want to tell someone something.
 - A(n) astronaut is a person who travels in space.
 - The space station orbits Earth, and people live and work in it.
 - A(n) spacecraft carries people into space and back.

8 Solve the riddles. Choose the word pair that matches the description in each riddle.

astronaut/rocket search/communicate spacecraft/space station

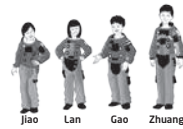
- You can do one of these things alone. The other thing needs two or more people. search/communicate
- You can be one of these things. The other thing will give you a boost. astronaut/rocket
- You can travel inside one of these things. You can live in the other thing. spacecraft/space station

GRAMMAR

Jiao, Lan, Gao, and Zhuang want to fly in a spaceship. **Everyone** wants to fly in a spaceship.
 Jiao or Lan or Gao or Zhuang can be an astronaut. **Anyone** can be an astronaut.
 Zhuang is tall. **Someone** is tall.
 Jiao, Lan, Gao, and Zhuang are not adults. **No one** is an adult.

9 Look and write. Tell about the picture.

anyone everyone no one someone



- No one is sitting down.
- Maybe someone told a joke because Gao is laughing.
- I don't see anyone wearing a helmet.
- Everyone is dressed as an astronaut.

10 Read and write. Use the words from Activity 9 to complete each sentence.

- I will be the only one home. Everyone else will be at work or school.
- Be careful and don't lose your book. Don't give it to anyone.
- It's very late. No one is on the phone at this hour.
- I don't know if it's Hugo or Luis, but I hear someone calling my name.

11 Listen and circle the answer. TR: 40

- Everyone / Someone wants to go to the planetarium.
- Someone / No one saw the comet.
- Anyone / Someone can answer that question.
- I want to invite someone / everyone to come with me.

Review

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

- | | |
|-------------|--------------|
| 1. hunt | a. flood |
| 2. predator | b. hide |
| 3. drought | c. defend |
| 4. attack | d. sandstorm |
| 5. blizzard | e. prey |



drought / flood blizzard / sandstorm

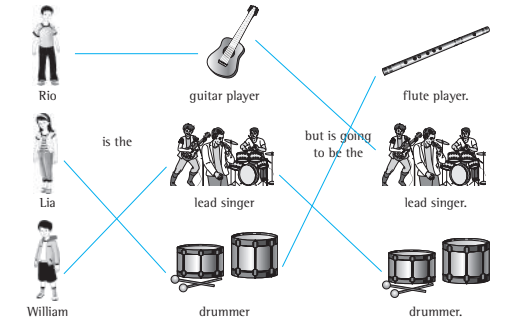


predator / prey hunt / hide attack / defend

2 Read and write. Complete the sentences with true information.

- If an insect uses camouflage, it wants to hide from a predator.
- If I hear classical music, _____
- If a rabbit sees a fox, _____
- If a snake has stripes, _____
- If she is the lead singer, _____

3 Look and listen. Then listen again. Draw lines to make sentences. TR: 44



4 Write. Complete the sentences.

- I play piano _____ than my friends.
- I study _____ than my classmates.
- I listen to music _____ than my parents do.
- I play soccer _____ than my teacher.
- My brother plays basketball _____ as my sister.

15 Listen and read. TR: 43

Life on Mars

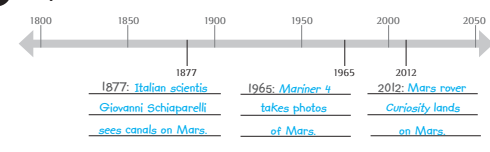
Mars is the fourth planet from the Sun. You can see Mars without a telescope, but you need a telescope to see it clearly. In 1877, an Italian scientist, Giovanni Schiaparelli, saw what he thought were canals on the surface of Mars. Canals are like rivers but made by people. People thought that Martians may have dug the canals!

When telescopes got better, people forgot the canal idea. In 1965, the spacecraft *Martiner 4* flew by Mars and took photos. The photos showed that the surface looks a lot like Earth's moon. Today, no one thinks that Mars has extraterrestrials.

In 2012, the Mars rover *Curiosity* landed on Mars. It found that tiny life might have lived on Mars long ago. Scientists will be studying and learning about Mars for many years to come.



16 Complete the chart. Use information from "Life on Mars."



Paragraphs of Persuasion

In persuasive paragraphs, you write to convince the reader of your opinion. To persuade the reader, you use facts to support your opinion. Write strong sentences that show you believe in what you are saying. Introduce your facts with expressions such as *research shows*, *according to*, and *the facts show that*.

17 Read. How does the writer persuade? Underline the words.

Forever Searching

Long ago, people thought that the Sun and planets orbited Earth. We like to think that we are at the center of things. But scientists studied the stars carefully. Their research shows that we are not at the center. Copernicus was the first to say that Earth orbits the Sun. He was right. And the Sun orbits the center of the galaxy. The universe has many stars that we can't see. And, according to some NASA scientists, somewhere there may be life.

Why do we search? The facts show that people have always been searchers. For example, Zheng was an explorer from China who traveled as far as Arabia and the Horn of Africa in the 1400s. Frederick Cook went to the North Pole in 1908. And Roald Amundsen traveled to the South Pole in 1911. We search both on Earth and in space because we like to find answers. And a big question is, are we alone? We will search until we know.



18 Write in your notebook. Do you think we should search for life in space? Take a position. Think about the possible benefits. Use facts to persuade.

5 Do the puzzle. Complete the sentences. Write the first letter of each word of the answer in the puzzle. Find the hidden message!

- The center of a daisy and the sun are both y e l l o w.
- Earth moves on a path called an o r b i t around the Sun.
- There are many galaxies in the u n i v e r s e.
- Someone who leaves Earth to travel in space is called an a s t r o n a u t.
- Many people think that r o c k music is too loud.
- A creature that lives on a planet that is not Earth is an e x t r a t e r r e s t r i a l.
- A g u i t a r is a string instrument used in most rock bands.
- A spacecraft is pushed into space by a r o c k e t.
- During an e m e r g e n c y, it's important to have a plan.
- The lion crawled through the tall grass before it a t t a c k e d the zebra.
- The loud crash that follows lightning is called t h u n d e r.

Hidden Message!

1	2	3	4	5	6	7	8	9	10	11
Y	O	U	A	R	E	G	R	E	A	T

6 Read. Check T for True and F for False.

This octopus needs to hunt, but it doesn't want to be hunted. If it is attacked, it first tries to escape. It can shoot water out of its body. The water pushes it through the sea. If a predator follows, the octopus can shoot black ink into the water. The predator can't see, and the octopus escapes. Then the octopus tries to hide. It sometimes hides under the sand with only its eyes pecking out. It also changes color to match its shelter. In some cases, an octopus will leave an arm behind! The arm still moves in the water and attracts the predator. The octopus escapes. In six weeks, it grows a new arm, but the new arm has no bones! An octopus has no bones at all!



- The octopus doesn't hunt. T F
- The octopus moves in the water by shooting black ink. T F
- The octopus can change its color. T F
- The octopus will sometimes break a bone in its arm and leave it behind. T F
- In six weeks, the octopus can grow a new arm. T F

7 Read and write the answer. Use information from Activity 6.

- What does an octopus do to escape from a predator?

- An octopus is smart. What are some smart things an octopus does?

- An octopus hunts. What kind of animal is it?

8 Write. A shark hunts an octopus. What can happen if the shark finds the octopus? Write a short story. Use what you learned in Activity 6.

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