

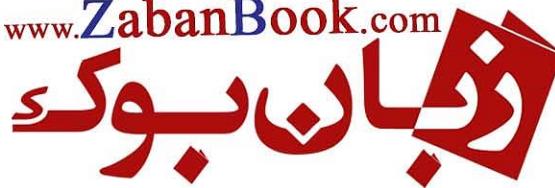
SECOND EDITION

3

INSIDE READING

The Academic Word List in Context

www.ZabanBook.com



Bruce Rubin

SERIES DIRECTOR:
Cheryl Boyd Zimmerman



OXFORD

The Academic Word List in Context

SECOND EDITION

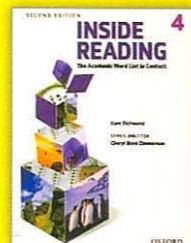
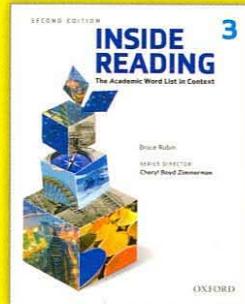
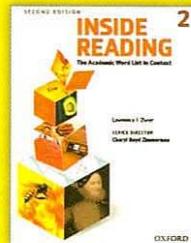
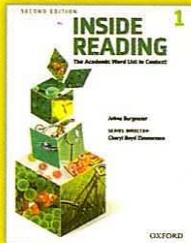
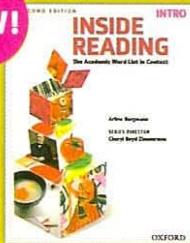


INSIDE READING

Develop reading skills and acquire the Academic Word List

- > Explicit reading skills provide the foundation for effective, critical reading
- > High-interest readings from academic content areas motivate students
- > Corpus-based examples from the Oxford English Corpus teach real-life English

NEW!



Oxford iTools

iTools are for use with an LCD projector or interactive whiteboard. With iTools you can:

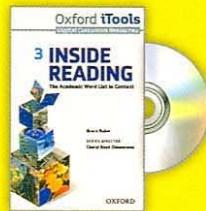
ENGAGE

Authentic videos and whole-class vocabulary activities build language proficiency



CONNECT

Audio synched with readings and print-and-go worksheets strengthen reading skills



ASSESS

Customizable Unit, Mid-term, and Final Tests evaluate student progress

About the Series Director



Cheryl Boyd Zimmerman is a professor of TESOL at California State University, Fullerton. She specializes in second-language vocabulary acquisition, an area in which she is widely published.

She teaches graduate courses on second-language acquisition, culture, vocabulary, and the fundamentals of TESOL, and is a frequent speaker on topics related to vocabulary teaching and learning.

Components

Student Book
978-0-19-441629-0

Student Website
www.oup.com/elt/student/insidereading

Teacher iTools
978-0-19-441639-9

Additional Teacher Resources
www.oup.com/elt/teacher/insidereading

www.ZabanBook.com
زنابوك

OXFORD
UNIVERSITY PRESS

www.oup.com

CEFR
B2
B1
A2

ISBN 978-0-19-441629-0

9 780194 416290

Contents

ACKNOWLEDGEMENTS	iii
AN INSIDER'S GUIDE TO ACADEMIC READING	vi

Unit 1 From Market to Mall 1

Content Area: Architecture

READING SKILL: Previewing and Predicting	2, 9
Reading 1: <i>The Architecture of the Marketplace</i>	3
Reading 2: <i>Press release, Southdale Mall</i>	10
Vocabulary activities	5, 12

Unit 2 Megacities 17

Content Area: Urban Planning

READING SKILL: Identifying Main Ideas vs. Supporting Details	20, 27
Reading 1: <i>The New Megalopolis</i>	18
Reading 2: <i>Ecopolis Now</i>	25
Vocabulary activities	21, 28

Unit 3 In the Public Eye 33

Content Area: Art & Design

READING SKILL: Skimming and Making Predictions	34, 42
Reading 1: <i>Public Art Controversies</i>	35
Reading 2: <i>One Person's Vandalism Is Another One's Art</i>	43
Vocabulary activities	38, 45

Unit 4 Staying Alive 49

Content Area: Public Health

READING SKILL: Interpreting Charts, Graphs, and Tables	53, 60
Reading 1: <i>The Determinants of Mortality</i>	51
Reading 2: <i>Immunization against Diseases of Public Health Importance</i>	57
Vocabulary activities	54, 61

Unit 5 Bodies in Motion 65

Content Area: Film Studies

READING SKILL: Summarizing a Text Using Nontext Elements	69, 76
Reading 1: <i>The Dartfish Olympics; BBC Sport Uses StroMotion™ Technique</i>	66
Reading 2: <i>Freeze Frames –Stopping Time</i>	73
Vocabulary activities	70, 76

Unit 6 The Physics of Fun 81

Content Area: Engineering

READING SKILL: Making Inferences	84, 92
Reading 1: <i>A Whale of a Wheel</i>	82
Reading 2: <i>Summer Fun Under Scrutiny</i>	90
Vocabulary activities	86, 93

Unit 7 Mind Wide Open 97

Content Area: Neuroscience

READING SKILL: Annotating and Highlighting a Text	98, 109
Reading 1: <i>Mind Wide Open</i>	99
Reading 2: <i>Out-of-Body Experience? Your Brain Is to Blame</i>	105
Vocabulary activities	102, 109

Unit 8 Child Prodigies 113

Content Area: Psychology

READING SKILL: Recognizing Comparison and Contrast	116, 123
Reading 1: <i>Child Prodigies</i>	114
Reading 2: <i>Not Like Other Kids</i>	121
Vocabulary activities	117, 124

Unit 9 The Competitive Instinct 129

Content Area: Business

READING SKILL: Understanding Time Signals	134, 140
Reading 1: <i>The Competitive Edge: A Timeline of Human Ingenuity</i>	130
Reading 2: <i>Building a Competitive Brand</i>	138
Vocabulary activities	134, 141

Unit 10 Getting There 145

Content Area: Geography

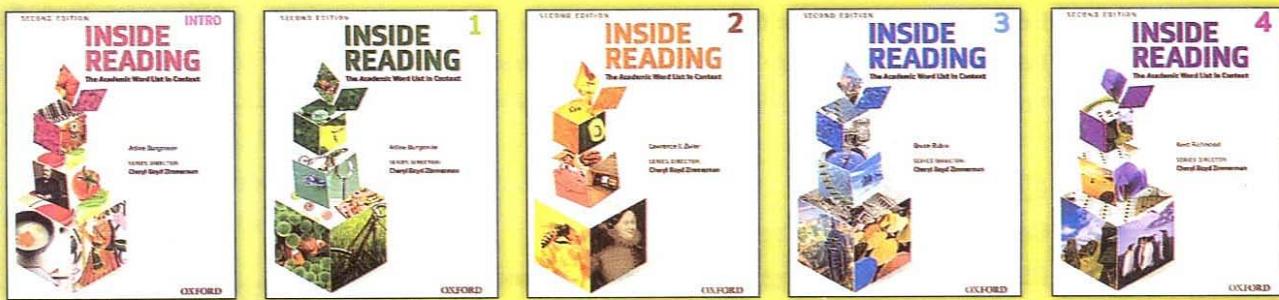
READING SKILL: Identifying and Understanding Metaphors	146, 149
Reading 1: <i>Getting There: The Science of Driving Directions</i>	147
Reading 2: <i>Navigation</i>	153
Vocabulary activities	150, 156

INDEX: ACADEMIC WORD LIST	161
--	-----

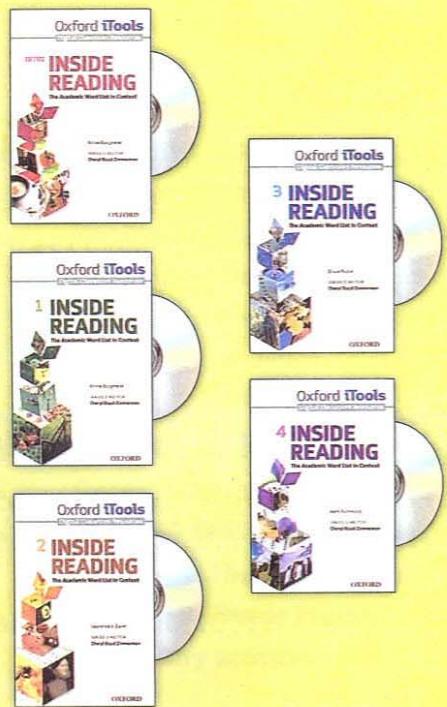
An Insider's Guide to Academic Reading

Develop reading skills and acquire the Academic Word List with *Inside Reading Second Edition*.

Student Books



iTools for all levels



Authentic video available on iTools and the Student Website.

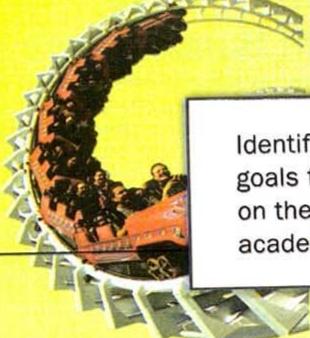
Getting Started

Each unit in *Inside Reading* features

- Two high-interest reading texts from an academic content area
- Reading skills relevant to the academic classroom
- Targeted words from the Academic Word List

UNIT
6
ENGINEERING

The Physics of Fun



In this unit, you will •

- read about the engineering behind the development of amusement park rides.
- review skimming and making predictions.
- increase your understanding of the target academic words for this unit.

READING SKILLS Making Inferences

Self-Assessment •

Think about how well you know each target word, and check (✓) the appropriate column. I have...

TARGET WORDS	AWL	adult	automate	brief	credit	distort	draft	input	obtain	paragraph	prior	regulate	revise	tradition	violate	
		never seen the word before	seen the word but am not sure what it means	seen the word and understand what it means	used the word, but am not sure if correctly	used the word confidently in either speaking or writing	used the word confidently in both speaking and writing									

Outside the Reading What do you know about amusement parks? Watch the video on the student website to find out more.

Oxford 3000™

Identifying the unit's goals focuses students on the **reading skill** and academic topic.

Self-assessment prepares students for the vocabulary in the readings.

Pre-unit videos engage students in the topic and activate prior knowledge.

TOUR OF A CHAPTER VII

High-interest Texts

READING 1

Before You Read

Read these questions. Discuss your answers in a small group.

1. Do you consider yourself to be a competitive person? Why or why not?
2. Do you think the urge to compete is something people are born with or something they learn from their parents? Why?
3. Does society have an effect on an individual's competitive drive? If so, how? Are some societies more competitive than others? Give examples to support your opinions.

MORE WORDS YOU'LL NEED

Instinct: the natural force that causes a person or animal to behave in a certain way without thinking about it.

① Read

This article is a timeline that traces the history of competition—personal, professional, and national.

Discussion questions activate students' knowledge and prepare them to read.

High-interest readings motivate students.

The Competitive Edge: A Timeline of Human Ingenuity



Are you a runner? A soccer player? Have you ever competed in a sport, felt the thrill of the game, or raced for the win? Why is it that our best performances are often those played against our toughest competitors? Ask Lilija Shobukhova (top right) of Russia when she attained her best marathon time. She won't tell you she did it while training alone. She did it while running—and winning—the 2011 Chicago Marathon, her third consecutive win. It's not just physical competition that inspires us. As many of us can testify, competition affects every aspect of life. The following timeline demonstrates that the competitive instinct has been around for a long time and has produced some staggering results.

next. From Greek mythology to the plays of Shakespeare, **classical** literature abounds with tales of rivalry between siblings. Often birth order, gender, and status within the family play into the clashes as siblings determine the best strategy for succeeding over the other. Whether it's for parental approval, wealth, or love, competition between siblings is an age-old story. It's a drama we don't tire of easily.

ANCIENT HISTORY THE STORIES WE TELL

Before written language developed, oral stories were handed down from one generation to the

1206 THE LARGEST EMPIRE

A boy abandoned in the Mongolian grasslands with his mother and siblings later controls the largest empire in history. As a warrior, he conquers the tribes competing for control of Mongolia and brings them under his rule, thereby earning the title "Genghis Khan," which means "ruler of all between the oceans." Now acknowledged as a leader, he **commences**

Academic Word List vocabulary is presented in context.

130 UNIT 9

Reading Comprehension

Read each sentence below. Choose the best answer to complete the sentence based on Reading 1.

1. According to the section "The Stories We Tell," humans have a long history of telling stories about _____.
 - a. physical competition of athletes
 - b. the path to literacy
 - c. competition between siblings
2. Using rhymes to help soldiers remember and follow through on orders was a strategy _____.
 - a. Filippo Brunelleschi
 - b. Genghis Khan
 - c. Prince Henry the Navigator
3. Capitalism is associated with competition because _____.
 - a. businesses are allowed to compete
 - b. William Makepeace Thackeray used the term
 - c. it leads to better quality and lower prices

Comprehension activities help students understand the text and apply the targeted academic vocabulary.

Explicit Reading Skill Instruction

READING SKILL

Summarizing a Text Using Nontext Elements

LEARN •

The task of summarizing a text can be broken down into two steps:

- Figure out the central ideas of a selection.
- Combine them briefly and clearly.

Also be sure to include the nontext elements—such as pictures, tables, charts, and graphs—in your summary.

APPLY •

1. Identify two main ideas in *The Dartfish Olympics*.

2. Identify two main ideas in *BBC Sport Uses StroMotion™ Technique*.

3. Look at the photos that accompany Reading 1. How do they link to the main ideas? Consider the photos on their own. What main idea do they present?

4. Combine the main ideas from 1, 2, and 3 above into a summary of Reading 1. One or two sentences should be enough.

Explicit reading skills provide the foundation for effective, critical reading.

Practice exercises enable students to implement new reading skills successfully.

READING SKILL

Summarizing a Text Using Nontext Elements

APPLY

1. Identify two main topics in Reading 2.

2. Look at the photos that accompany Reading 2. How do they link to the main ideas? Consider the photos as a group. What main idea does the group present?

3. Combine the main ideas from the text and the accompanying images into a summary of Reading 2.

REVIEW A SKILL Identifying Main Ideas vs. Supporting Details (See p. 20)

Read the article on pages 73–75. As you read each paragraph, think about the author's main purpose. Identify the main ideas and supporting details for each paragraph and write these in your notebook.

Recycling of reading skills allows students to apply knowledge in new contexts.

The Academic Word List in Context

Based on a corpus of 3.4 million words, the **Academic Word List (AWL)** is the most principled and widely accepted list of academic words. Compiled by Averil Coxhead in 2000, it was informed by academic materials across the academic disciplines.

Vocabulary Activities STEP I: Word Level

- A. Complete these sentences using the target vocabulary in the box.

abstract
dramatic

dramatist
invisible

transition
transitional

visibility

1. Many believe that the best _____ in English was Shakespeare. He wrote at least 37 plays.
2. When writing an essay, it is important to use a _____ to connect the ideas in one paragraph with those in the next paragraph.
3. A painting without a story or representational image is referred to as _____ art.
4. The observation deck at the top of a tall building provides the best view of a city, but only if there is clear _____ that day.
5. The strong contrast between light and dark in black-and-white films can create quite a _____ effect.
6. Doctors can use a strobe and a powerful lens inside the body to make _____ processes viewable on a computer screen.
7. The office hasn't moved completely to the new location yet. We're still in a _____ phase.

Word level activities focus on meaning, derivations, grammatical features, and associations.

Instruction and practice with varying types of word knowledge helps students become **independent word learners**.

Vocabulary Activities STEP II: Sentence Level

An *image* has both concrete and abstract meanings, but they all connect to the idea of a picture of something.

The *images* on the screen reminded him of the town where he grew up.

The *image* of the building was beautifully reflected in the lake.

Many people have the *image* of Canada as being cold all the time.

Ads try to create a positive *image* of a product.

The verb *imagine* and the noun *imagination* also come from the word *image*.

There are many expressions and collocations that feature the word *image*.

She is the very image of her sister. (She looks exactly like her sister.)

He is the very image of sophistication. (He has all the qualities of sophistication.)

She is the spitting image of her father. (She looks and acts like her father.)

Vocabulary work progresses to sentence level and focuses on collocations, register, specific word usage, and learner dictionaries.

- E. Match each use of the word *image* with the field to which it typically belongs. Then, write an example sentence for each context. Discuss your sentences in a small group.

- | | |
|-------------------------|--|
| — 1. art | a. the public personality or character presented by a person |
| — 2. psychology | b. a symbol or metaphor that represents something else |
| — 3. business/marketing | c. a duplication of the visual form of a person or object |
| — 4. literature | d. an advertising concept conveyed to the public |

Psychology: As role models for young people, pop stars should maintain a healthy, responsible *image*.

From Research to Practice

The Oxford English Corpus provides **the most relevant and accurate picture of the English language**. It is based on a collection of over two billion carefully-selected and inclusive 21st century English texts.

The word *sphere* can refer to any round object or something having a round dynamic, like this instance from Reading 1:

"...brains, software, cities, and ant heaps ... become the webs and **spheres** of efficient mass circuitry."

In Reading 2, *sphere* refers to "an area of interest or activity":

"People often attribute such experiences to paranormal forces outside the **sphere** of material life."

The related word *hemisphere* means "half of a sphere." In biology, it is used to refer to the left and right sides of the brain. In geography, it is used to refer to parts of the world.

*Most parts of the brain related to language are in the right **hemisphere**.*

*In the northern **hemisphere**, winter is in December, January, and February.*

B. Categorize these synonyms for *sphere* by definition. (One of the words will be used twice.) Add any other synonyms for *sphere* you can think of to the lists.

ball circle	domain field	globe planet	zone
round		area of interest or activity	
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

C. Complete these sentences using the words in the box. Compare answers with a partner.

academic sphere hemispheres	sphere of influence spherical objects	wider sphere
--------------------------------	--	--------------

1. Artists must be able to draw square, cylindrical, triangular, and _____, like oranges and balls.
2. Historically, China has had a broad _____ in East Asia.
3. The globe can be divided into four _____: Eastern, Western, Northern, and Southern.
4. The professor's work is little known outside the _____ of the university.
5. His books are detective stories, but he hopes that they will appeal to a _____ than only mystery lovers.

Corpus-based examples from the Oxford English Corpus of American English. Real-life examples help students learn authentic English.

Resources

STUDENT SUPPORT

For additional resources visit:
www.oup.com/elt/student/insidereading

- > **Reading worksheets** provide additional skill practice
- > **Videos** set the stage for specific units
- > **Audio recordings** of every reading text

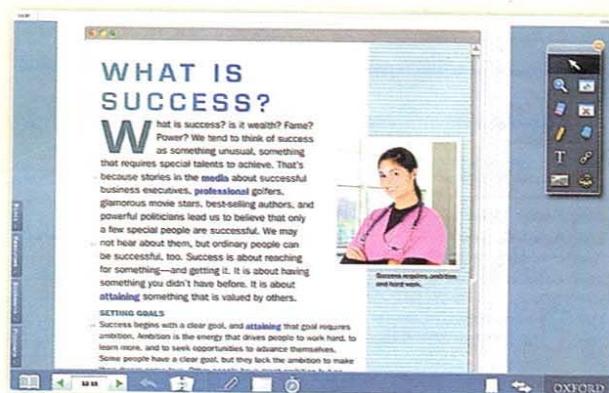


TEACHER SUPPORT

The *Inside Reading* iTools is for use with an LCD projector or interactive whiteboard.

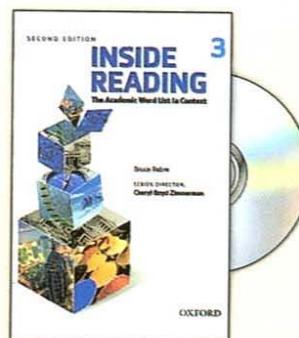
Resources for whole-class presentation

- > Audio recordings of all reading texts with “click and listen” interactive scripts
- > Animated presentations of reading skills for whole class presentations
- > Videos for specific units introduce students to the reading text topic and activate prior knowledge.
- > Fun vocabulary activities for whole-class participation



Resources for assessment and preparation

- > Printable worksheets for extra reading skill practice
- > Printable and customizable unit, mid-term, and final tests
- > Answer Keys
- > Teaching Notes
- > Video transcripts



Additional resources at:

www.oup.com/elt/teacher/insidereading

UNIT

1

From Market to Mall



In this unit, you will

- read about the history of the shopping center and developments that led to the birth of the modern shopping mall.
- learn about the design and function of shopping centers.
- increase your understanding of the target academic words for this unit.

READING SKILLS Previewing and Predicting

Self-Assessment

Think about how well you know each target word, and check (✓) the appropriate column. I have...

TARGET WORDS

AWL

academy	never seen the word before	seen the word but am not sure what it means	seen the word and understand what it means	used the word, but am not sure if correctly	used the word confidently in either speaking or writing	used the word confidently in both speaking and writing
approach						
concept						
construct						
couple						
enhance						
function						
partner						
pose						
publication						
range						
region						
select						
simulate						
uniform						

www.ZabanBook.com

زنگنه بوک

READING 1

Before You Read

Read these questions. Discuss your answers in a small group.

1. Describe your favorite shopping center or mall. What is special about it? What types of things do you usually buy there?
2. Besides shopping, what else is there to do at the mall? Are there things just for people your age? For young children? For older people?
3. Do you think that shopping malls are part of a community or something separate from it? Why? Do you think they've always been that way?

READING SKILL

Previewing and Predicting

LEARN

Previewing a text helps you predict what the text is going to be about. This helps prepare you for taking in information and remembering it.

Before reading a text, preview it:

- Read the titles or headlines.
- Look at the pictures and read the captions.
- Skim the text for names and details that are mentioned frequently.

This allows you to *anticipate the topic* of the text and prepare yourself to learn more about it.

APPLY

Skim Reading 1. Look for and note these things. Then make some predictions.

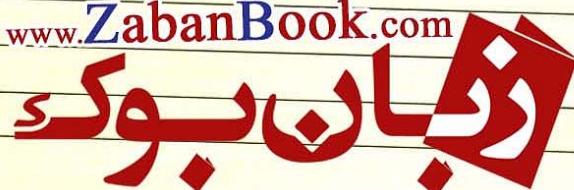
1. A frequently mentioned location or type of building: _____

2. Some dates: _____

3. Some specific global locations: _____

4. Some information sources: _____

5. What is this text going to be about? www.ZabanBook.com



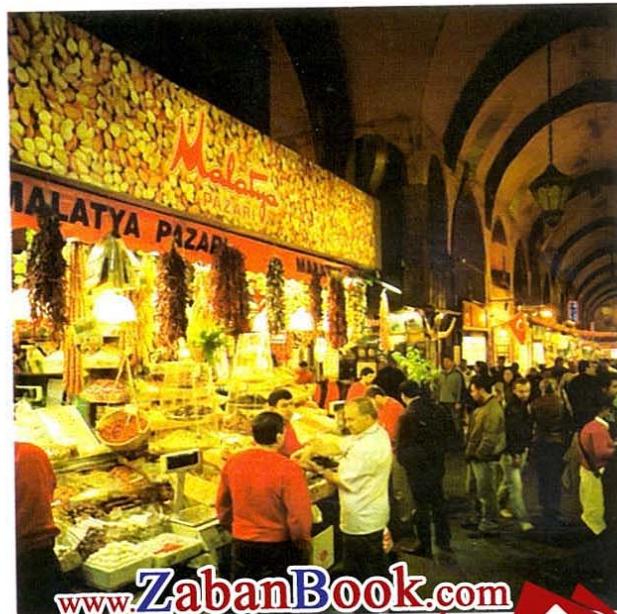
The Architecture of the Marketplace

Buildings are among the most lasting of human creations. Their forms and **functions** are evidence of the dynamic social life that has long been tied to centers of economic and political power. One ancient structure and gathering place, the marketplace, has evolved into what we call today the **regional** shopping center or mall. It is often **constructed** on a site so big that it requires a **location** outside of the crowded urban center. There it sometimes develops into a commercial rival to the older city center.

In many ways, these 21st-century malls are nothing new. In fact, they follow a long tradition of commercial expansion that began with the development of the first long-distance trade networks and markets. These markets were temporary at first, but they became more permanent with the rise of cities in the Middle East about five thousand years ago. They grew alongside the rivers, harbors, and overland caravan routes that connected the swelling towns of the agricultural era.

The population growth and economic prosperity of the agricultural society made possible the advancement of specialized craftspeople and merchants. These people met to barter, buy, or sell their merchandise in a place that was accessible, safe, and regulated. By 30 2000 BC, in the ancient Sumerian city of Ur (in what is now Iraq), the covered bazaar and the shop-lined street had established itself.

The traditional bazaar consists of shops in streets that can be closed off by gates at each end. This follows the historical town-planning requirement that commercial and residential areas be kept strictly apart. Though they are far from **uniform**, bazaars are typically divided into



www.ZabanBook.com

زنگنه بوک

A bazaar in Istanbul, Turkey, various sections that each specialize in a trade or craft. In small towns, the bazaar can be as small as a single covered street, while in large cities it can be a vast area filled with mazelike passageways. The Grand Bazaar of Tehran is ten kilometers long, while the one in Istanbul, dating from the 15th century, has more than 58 streets and 4,000 shops. Historically, as in modern times, the bazaar was a source of tax revenue for the government. In return, the government provided the bazaars with a system of internal security and justice.

In the Greek cities of the 5th century BC, the marketplace was the *agora*. The historian Lewis Mumford describes the agora as an open-air “place of assembly ... where the interchange of news and opinion played almost as important a part as the interchange of goods.” The agora was also a place for seasonal festivals and sports such as horse racing. The expansion of the agora

in both physical size and variety of traded goods reflected the shift in the Greek economy from neighborly rural trading to long-distance multicultural exchange. The descendants of the agora are the piazzas and plazas in both Europe and the Americas.

One of the most appealing variations on the model of the ancient marketplace was the European arcade that appeared in the 18th century. An arcade was typically a covered set of city streets similar to the bazaar, but it retained some of the openness of the agora through the use of vaulted, or arched, skylights. One of the first arcades was the Gostiny Dvor in St. Petersburg, Russia, built between 1757 and 1785. It has an open floor that simulates the Italian piazza but is covered by a glass roof that imitates the openness of the agora even during cold Russian winters. The Gostiny Dvor remains one of the finest shopping centers in Northern Europe.

In Southern Europe, the Galleria Vittorio Emanuele II, named after the first king of united Italy, opened in Milan in 1867. Vaulted iron and glass ceilings provide both shelter and light for shopping in the middle of a dense city.

A young Viennese architect named Victor Gruen was among the many visitors who were favorably impressed by the Galleria. In the 1950s, Gruen was commissioned¹ to design a regional shopping mall in the state of Minnesota in the northern United States. The Galleria Vittorio Emanuele II served as the starting concept for his mall design.

The cold weather in Minnesota posed a special challenge to shopper comfort. Gruen's approach was to enclose the whole building. The mall was built away from big cities and was accessible mainly by automobile, so it required a sea of automobile parking spaces outside. The result, called Southdale, was a spacious suburban destination. It attempted



A piazza in Zagreb, Croatia

to retain the inviting festivity of the agora, the energy of the bazaar, and the lightness of the arcade. It included enhanced climate control, easy access, and a range of other inviting conveniences and attractions.

Southdale soon became the archetype² for the modern mall.

Since Southdale, huge regional shopping malls have sprung up all over the world. They commonly include several main "anchor" stores, an ice skating rink, movie theaters, a themed hotel, and an amusement park or other major attraction. Such huge shopping and entertainment centers depend on the willingness and ability of people to travel some distance and shop or play for long periods of time.

In the early 2000s, hundreds of such malls were constructed in the People's Republic of China. In 2008, a vast complex in the United Arab Emirates, the Dubai Mall, attracted over 37 million visitors in its first year alone. The mall, one of the largest in the world, features over 1,200 stores, a marine aquarium, and an Olympic-sized ice skating rink. It is set for visitors, and its surrounding neighborhood has been called "the new heart of Other world malls of the future include Istanbul Cevahir, the Mall Taman Anggrek, Orchid

¹commissioned: officially asked to make or create something

²archetype: the most typical or perfect example of a particular thing

Garden Mall) in Jakarta, Indonesia, and the
135 West Edmonton Mall in Alberta, Canada, which
features a water park.

From moveable markets, to bazaars and
agoras, to the sprawling modern **regional**

mall, the social function of a marketplace has
140 changed greatly. One thing remains the same:
these centers of trade and retail marketing
indicate economic prosperity and serve as
global status symbols. ■

Reading Comprehension

Mark each sentence as **T** (true) or **F** (false) according to the information in Reading 1.
In your notebook, cite the location of the information by line number, and correct
each false statement.

- 1. Regional shopping centers and malls exist today in a wide range of global locations.
- 2. The construction of a large retail center is an indication of economic prosperity.
- 3. The concept of a regional trade market is new to human social life.
- 4. Agriculture created food surpluses that enhanced the development of civilization.
- 5. The open-air market called the *agora* originally came from South America.
- 6. The bazaars of the Middle East are quite uniform in appearance.
- 7. The European arcades simulated both the bazaar and the agora.
- 8. Architect Victor Gruen's approach to Southdale, a fully enclosed American shopping complex, was inspired by an arcade he had seen in Russia.

Vocabulary Activities **STEP I: Word Level**

The word *uniform*, as a noun, refers to the set of clothes worn by people in the same job or organization, for example, a military uniform or a football uniform.

As an adjective, *uniform* means “the same in all cases and at all times.” It is often used for technical descriptions, for example, uniform standards for construction projects.



A. Which aspects of these things or situations should be uniform? Discuss your answers in a small group. What else should be uniform or have uniform aspects?

- | | |
|---------------------------------|--------------------------------|
| 1. a busy city street | 5. workers in the same company |
| 2. chain restaurants | 6. cars |
| 3. textbooks used in one school | 7. other: _____ |
| 4. schools in different regions | 8. other: _____ |

Bodies in Motion



In this unit, you will

- ▶ read about the latest developments in photographic motion studies conducted for science, industry, medicine, athletics, and art.
 - ▶ review identifying main ideas vs. supporting details.
 - ▶ increase your understanding of the target academic words for this unit.

READING SKILLS Summarizing a Text Using Nontext Elements

Self-Assessment

Think about how well you know each target word, and check (✓) the appropriate column. I have...

TARGET WORDS	never seen the word before	seen the word but am not sure what it means	seen the word and understand what it means	used the word, but am not sure if correctly	used the word confidently in either speaking or writing	used the word confidently in both speaking and writing
AWL						
abstract						
appreciate						
available						
display						
drama						
encounter						
expose						
hence						
image						
restore						
sequence						
series						
transit						
version						
visible						

Before You Read

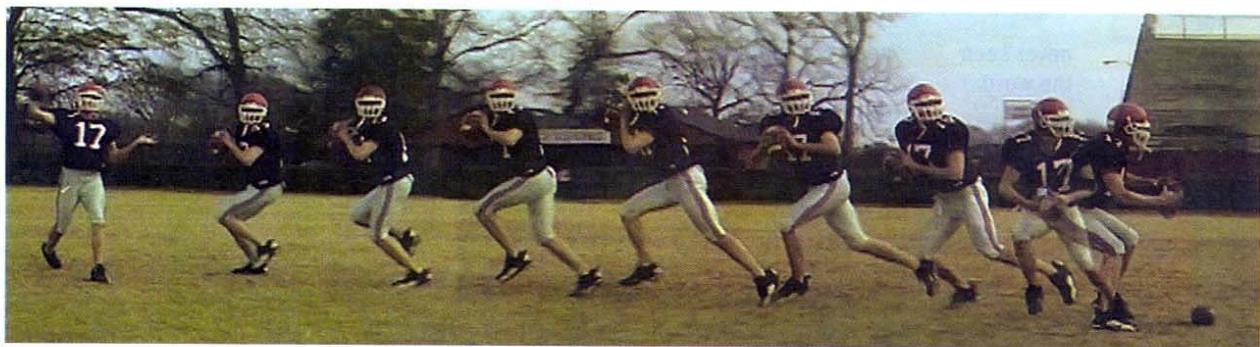
Read these questions. Discuss your answers in a small group.

- How do you assess your own performance in sports, or another physical activity (dance, aerobics, etc.)?
- Do you like the slow-motion replays of important moments in a sports program? Why or why not? What is the point of them?
- Have you ever seen video of your performance? If so, was it helpful? How? If not, do you think it would be helpful? How?

 **Read**

The first selection was adapted from the “Collision Detection” column of the online magazine *Slate*. The second selection was adapted from press releases by BBC Sport and the websites of Dartfish and its American partner, Sportvision.

THE DARTFISH OLYMPICS



StroMotion™ shows frame by frame action.

**POSTED BY: CLIVE THOMPSON,
AUGUST 24, 10:55 A.M.**

If you've watched the most recent summer and winter Olympics, you've probably seen StroMotion™—the photo software that breaks an athlete's fluid movements into stop-motion-style freeze-frames. This fascinating software is made by the Swiss company Dartfish, and apparently Olympians have been using it to train in an incredibly innovative way. They use film footage of the performance of a past Olympic 10 athlete and **display** it alongside footage of themselves. Both **sequences** are broken down into StroMotion™ frames.

As the Associated Press reports, pole vault star Toby Stevenson used Dartfish to virtually 15 “compete against” a video of Sergey Bubka, the world record holder.

“I used it until smoke came out of the machine. It's great,” said Stevenson, who won the silver medal in the 2004 Olympic men's pole vaulting 20 event. Stevenson could review his practice jumps on a laptop within seconds. Within two hours of a track meet, he was able to watch himself on an LCD projector back at the hotel. Or he had his day's work burned onto a CD.

25 While Stevenson's muscles told him one thing, the digital video might **display** something else.

"It was a big reason for my success," Stevenson said. "I made a jump, and between every jump I watched my jump, and after practice I watched 30 every jump on Dartfish."

This reminds me of the idea of the "ghost" competition in many popular video games. I first encountered it in the original Mario Kart back in 1996: You could race around a track and then do it 35 again, competing against a recorded, "ghost," version of yourself. Competing against your ghost—or that of a world-ranked competitor—is now a pretty common thing in many games. It reminds me of how game innovations have constantly pioneered 40 techniques that are transforming how we view, and play, real-world sports.

There is some debate about whether this is a good thing. Some famous judges—such as Cynthia Potter, a well-known diving analyst—wonder 45 whether StroMotion™ is harming the sport. When judges use it, it might encourage them to give demerits¹ for things they normally wouldn't see.

"With the naked eye, you don't see these tiny little things that might be called deductions," 50 says Potter, as divers lined up for midday practice plunges² at an Olympic venue. "I don't know if you'd even need judges if you could program all this into a computer."

But, she continues, "Human judges allow for 55 artistic judgment—and allow divers to put personality in their dives."

Of course, this isn't an entirely new thing. The photo finish has been around for decades in many sports—and has caused huge 60 controversies in everything from the 100-meter dash to car racing. Modern media are likely to make things even stranger. I can easily envision the next few Olympics, since Dartfish has released a program for use on 65 mobile devices. I imagine fans getting personalized StroMotion™ streams sent to their mobile phones, which they can view and then vote on which athlete did the best dive.

BBC SPORT USES STROMOTION™ TECHNIQUE

BBC Sport is a leader in sports broadcasting innovation and was the first network in British television to use the StroMotion™ technique.

StroMotion™ is an image enhancement 5 technique. It creates stunning video footage displaying the evolution of an athlete's movement, technique, execution, and tactics over space and time.



Sports competition and viewing is being changed by StroMotion™.

Television sports viewers are able to see 10 an athletic movement, such as the line of a skier, unfold before their eyes by compounding video images into a frame-by-frame sequence. The StroMotion™ concept is based on stroboscoping, a means to analyze 15 rapid movement so that a moving object is perceived as a series of static images along the object's trajectory.³

StroMotion™ special effects add particular value to winter sports. For example, the StroMotion™ 20 technique applied to an ice skater during a jump allows us to clearly see the technique and quality of its execution by highlighting the maneuver—the preparation phase, the elevation progression, the inclination and 25 straightness of the body, and the quality and speed of execution.

¹ demerits: points against something that is being judged

² plunges: sudden, forceful falls or dives into something

³ trajectory: the path of something in motion

SECOND EDITION

INSIDE READING

The Academic Word List in Context

This recording is copyright and unauthorized copying is illegal.



MP3-CD

3

Bruce Rubin

SERIES DIRECTOR:
Cheryl Boyd Zimmerman

زنگنه
ZabanBook.com