Professional Cycling
Vocabulary Preview

Preview 1

These sentences contain information from the readings. Fill in the blanks with the word that best completes each sentence.

- individual
- participate
- percent
- physically
- survive

1. To win the Tour de France, a cyclist must _________ three weeks of very difficult bicycle racing.
2. The cyclists are quite thin: only about 3 or 4 _________ of their total body weight is fat.
3. The riders who _________ in the race train all year to prepare for the Tour de France.
4. Riders must be mentally and _________ strong in order to finish the race.
5. The _________ who finishes all 21 days with the lowest total time wins the race.

Preview 2

Look at the way the underlined words are used in the sentences. Match each word with its meaning or definition.

1. He estimated that it would take about three hours to ride his bicycle 50 miles.
2. Riders use computers and heart rate monitors to collect data while they race and train.
3. Athletes who are paid or win prize money in sports are professionals. Amateurs aren’t allowed to make any money.
4. It is hard for riders to sustain such a fast pace for three weeks.
5. A rider can win or lose the Tour de France by a few seconds, even on the final day of the race.
Vocabulary Mastery 1

1. estimated a. the last one
2. data b. a person who does something for money
3. professional c. to continue, to maintain
4. sustain d. information
5. final e. calculated roughly or approximately

Reading Preview: What Do You Already Know?
Circle the correct answer. If you don’t know the answer, guess.

1. Lance Armstrong is
   a. an astronaut
   b. a famous cyclist
   c. a cancer researcher
   d. originally from France

2. Lance Armstrong is probably best known for
   a. wearing only yellow cycling shirts
   b. surviving cancer
   c. winning the Tour de France seven years in a row
   d. coaching young cyclists

3. Lance started bicycle racing
   a. because he wanted to get in shape
   b. when he was a teenager
   c. so he could win prize money
   d. because he wasn’t a good student
Introduction to the Readings

(1) Lance Armstrong was born in 1971 in Plano, Texas. He was a natural athlete. He joined a swim club when he was 12 and began swimming seriously. At age 13 he entered an IronKids Triathlon. In a triathlon, the athletes compete in three sports: biking, swimming, and running—three sports that Lance was good at. He won his first triathlon easily and, by age 16, was competing **professionally**. Bicycling soon became his only sport, and during his senior year in high school, Lance trained with the U.S. Olympic cycling team. He began cycling on a full-time basis and competed in the 1989 junior world championships. In 1991 he was the U.S. National Amateur Champion, and he **participated** in the 1992 Olympic games in Barcelona (Spain). Lance’s first professional race was the 1992 Classico San Sebastian. He finished in last place, 27 minutes behind the winner, but he refused to quit. That race showed Lance’s **attitude** toward life: Don’t quit, no matter what. That attitude helped him **survive** the next big **challenge** in his life.

(2) In 1996 Lance was the top cyclist in the world. But in October of 1996, he **found** out that he had cancer that had already spread to his lungs and brain. Even though his doctors gave him a less-than 50 **percent** chance of **surviving**, he did **survive**. He lived through two difficult surgeries and chemotherapy. He was able to start riding and training again just five months after his cancer was discovered. He began racing again in 1998.

(3) Lance has **achieved** amazing things since his **recovery** from cancer. He is the only person to win the Tour de France seven times in a row—winning in 1999, 2000, 2001, 2002, 2003, 2004, and 2005. In addition to cycling, Lance **established** the Lance Armstrong **Foundation**. This organization provides services and support to cancer patients, cancer survivors, and their families. His “don’t quit” attitude continues to give hope and to inspire fans and cancer survivors everywhere.
4 ♦ Vocabulary Mastery 1

**Reading 1: The Tour de France**


(4) It would be easy to see the Tour de France as just another sports event: 200 riders cycling through France, mountains included, over three weeks in the heat of the summer. There is no reason to attempt such a thing. It’s a contest in suffering. But for reasons of my own, I think it may be the greatest challenge in the world. To me, of course, it’s about living.
A little history: the bicycle was invented during the industrial revolution and the first Tour was held in 1903. Of the 60 racers who started, only 21 finished. The event immediately interested the people of France. An estimated 100,000 people lined the roads into Paris to watch the race, and there was cheating right from the start: drinks were spiked, * and leaders hoping to slow other riders down threw tacks and broken bottles onto the road. These early riders carried their own food and equipment. Their bikes had just two gears, and they used their feet as brakes. Mountain stages were introduced in 1910 (along with brakes) when the cyclists rode through the Alps, despite the fear of attacks from wild animals. In 1914, the race began on the same day that the Archduke Ferdinand of Austria was shot. Five days after the finish of the race, World War I began.

Today the race depends on technology. The bikes are so light you can lift them overhead with one hand, and the riders are equipped with computers, heart rate monitors, and even two-way radios. But the essential test of the race has not changed: who can best survive the difficulties and find the strength to keep going? After my own battle with cancer I couldn’t help feeling it was a race I was made for.

Reading 2: Winning Is in the Details


There was no mystery or miracle drug that helped me win the Tour de France in 1999. It was a matter of better training and technique and my experience with cancer and willingness to make the sacrifices. If you want to do something great, you need a strong will and attention to detail.

The Tour is basically a math problem. A 2,000-mile race over three weeks that’s sometimes won by a difference (or margin) of a minute or less.
How do you move yourself through space on a bicycle, sometimes steeply uphill, at a speed **sustainable** for three weeks? Every second counts.

(9) Riders have to be willing to look at any small part of their body or bike to find extra time. Once you reach a certain level, everyone is good and trains hard. The difference is who is more willing to find the smallest bits of time. You have to become a slave to **data**. You have to measure literally every heartbeat, and every bite you eat, down to every spoonful of cereal. You have to be willing to look too thin, with your body-fat around 3 or 4 **percent**, if it made you faster. If you weigh too little, you wouldn’t have the **physical resources** to produce or **generate** enough speed. If you weigh too much, your body is a burden.* It is a matter of power to weight.

(10) Who knew when you might find a winning difference in December, during equipment testing? You might find another fraction of time in your position on the bike, or in a helmet, or in the composition of a wheel. The winning is really in the details. It’s in the details that you get ahead. And in racing, if you aren’t getting ahead, you might as well be going backward.

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**Reading 3: Stage Racing**

Excerpt adapted from *Bike Racing 101* by Kendra and René Wenzel
(Champaign, IL: Human Kinetics, 2003), 204–5.

(11) To win a stage of any race, a rider must have the lowest **accumulated** time over all stages. For each stage completed, her finishing time is recorded and added to her times for **previous** stages. The list of all the riders who have completed all stages so far, organized in order of total time, is called the general classification, or GC. A rider must complete every stage in order to place in the **final** GC.
Each stage has an **individual** winner, and each day has a GC leader. After the first stage, the stage winner **automatically** becomes the **overall** race leader and is given a special jersey (in the Tour de France, it’s the yellow jersey or *maillot jaune*). If that same rider wins the next stage or finishes in close enough time to that stage’s winner, she keeps the lead and the leader’s jersey. If the current leader loses enough time that another rider **achieves** the lowest total time, the jersey goes to the other rider. The current stage winner may not be the current overall leader. That depends on the amount of time the riders in the GC make or lose against one another. Stage racing is exciting because a great ride by a competitor or a terrible ride by the current race leader can overcome a multi-minute lead even in the final stage of the race.

(13) The most famous example of a last-stage comeback happened during the 1989 Tour de France. Frenchman Laurent Fignon, *comeback: recovering a lead or a return to success*
looking for his third Tour de France win, went into the final stage in Paris feeling reasonably certain he could hang on to his 50-second lead over American Greg LeMond during the short 24-kilometer (15-mile) finishing time trial.

*LeMond won the three-week race by just eight seconds as Fignon crossed the line exhausted. LeMond’s look of joy and Fignon’s collapse off his bike equal any great moment in sports.*
Comprehension Check

Did you understand the readings? Mark these sentences true (T) or false (F).

_____ 1. The Tour de France began in France a little more than 100 years ago.

_____ 2. During the Tour de France, cyclists ride all the way around France, a distance of about 2,000 miles, in three weeks.

_____ 3. The route of the Tour de France is flat and follows the coastline of France.

_____ 4. Modern technology has made the Tour de France much safer and easier.

_____ 5. Armstrong won the 1999 Tour de France because he trained hard and paid attention to data and small details that helped him ride faster.

_____ 6. Cyclists have to watch their weight carefully to find the best balance between strength and body weight.

_____ 7. The GC winner is the rider with the lowest total time at the end of each day.

_____ 8. Laurent Fignon won the 1989 Tour de France by only a few seconds.
Word Study

Target Vocabulary

<table>
<thead>
<tr>
<th>accumulate</th>
<th>final</th>
<th>physical</th>
</tr>
</thead>
<tbody>
<tr>
<td>automate (automatically)</td>
<td>individual</td>
<td>professional (professionally)</td>
</tr>
<tr>
<td>data</td>
<td>monitor</td>
<td>resource</td>
</tr>
<tr>
<td>establish</td>
<td>participate</td>
<td>survive</td>
</tr>
<tr>
<td>estimate</td>
<td>percent</td>
<td>sustain (sustainable)</td>
</tr>
</tbody>
</table>

Word Parts

Words are made up of different parts. The root or stem is the part of the word that carries the main idea or basic meaning. A prefix is a part that is added before the root. A suffix is a part that is added after the root. Prefixes and suffixes change or add to the meaning of the root. English has many prefixes and suffixes. Look at these examples.

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Root</th>
<th>Suffix</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>nonsense</td>
<td>non- meaning “not”</td>
<td>sense</td>
<td>not making sense</td>
</tr>
<tr>
<td>overlook</td>
<td>over- meaning “above”</td>
<td>look</td>
<td>to ignore, to look at from above</td>
</tr>
<tr>
<td>predict</td>
<td>pre- meaning “before”</td>
<td>dict from the Latin word dicere meaning “to say”</td>
<td>to know or tell something before it actually happens</td>
</tr>
<tr>
<td>lightness</td>
<td>light</td>
<td>-ness meaning “a condition or quality of something”</td>
<td>the quality of being light</td>
</tr>
<tr>
<td>slowly</td>
<td>slow</td>
<td>-ly meaning “in a certain way”</td>
<td>in a slow way or manner</td>
</tr>
<tr>
<td>annually</td>
<td>annual</td>
<td>meaning “in a certain time period”</td>
<td>happening every year</td>
</tr>
</tbody>
</table>
Exercise 1: Prefixes and Suffixes

A. Underline the prefix or suffix in each word, and then write the word in the correct column. Some words may contain a prefix and a suffix. The first one has been done for you.

<table>
<thead>
<tr>
<th>breakable</th>
<th>happiness</th>
<th>overachieve</th>
<th>previously</th>
</tr>
</thead>
<tbody>
<tr>
<td>densely</td>
<td>nonperishable</td>
<td>overeat</td>
<td>quickly</td>
</tr>
<tr>
<td>dryness</td>
<td>nonviolent</td>
<td>precede</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>non-</th>
<th>over-</th>
<th>pre-</th>
<th>-able</th>
<th>-ness</th>
<th>-ly</th>
</tr>
</thead>
<tbody>
<tr>
<td>overeat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. Do you know any other words that have these prefixes or suffixes? Add them. Compare your answers with another student. Did you learn any new words?
Exercise 2: Word Meanings

Use what you know about prefixes and suffixes to match each word on the left with the correct meaning on the right. The first one has been done for you.

____ 1. overeat a. rapidly, speedily
____ 2. previously b. a feeling of pleasure and contentment
____ 3. densely c. to be lacking water or moisture
____ 4. breakable d. to do much more than is expected
____ 5. happiness e. to be crowded together or packed tightly
____ 6. quickly f. at some time before
____ 7. dryness g. peaceful, not violent
____ 8. overachieve h. to come in front of or earlier than something
____ 9. nonviolent i. will not spoil or go bad quickly
____ 10. nonperishable j. able to be broken
____ 11. precede k. to eat too much

Word Relationships

Words can be related to each other in different ways. Words can be synonyms, antonyms, or compounds. Words can also belong to the same category. Read these definitions.

Synonyms are words that have almost the same meaning. Synonyms for cold are chilly, freezing, nippy, cool, and frosty.

Antonyms are words that have opposite meanings. The words cheap, inexpensive, reasonable, and economical are antonyms for the word expensive.

Compounds are a combination of two or three words that have a particular meaning when they are used together as a fixed phrase. Some compounds are written as one word (babysitter, online); others are written as separate words (full time, industrial revolution).

Words can also belong to the same category. For example, the words apple, banana, orange, and cherry all belong to the category fruit. The words green, red, blue, and yellow all belong to the category color.
Exercise 3: Synonyms

A **synonym** is a word that has basically the same meaning as another word. Draw a line from each word on the left to its synonym(s) on the right. The first one has been done for you.

1. **final**  
   a. gather  
   b. watch
2. **data**  
   c. live  
   d. last
3. **survive**  
   e. collect  
   f. observe
4. **establish**  
   g. numbers  
   h. create
5. **accumulate**  
   i. end  
   j. prove
6. **monitor**  
   k. endure  
   l. information
The Grammar of Words and Word Families

When you learn a new word, you should pay attention to the grammar of the word. What part of speech is it? If the word is a noun, is it a countable noun or an uncountable noun? If it is a verb, is it a regular verb or an irregular verb? Is it an adjective or an adverb?

Words belong to word families. A word family is made up of all the grammatical forms of a word. These forms are also called derivatives. Remember that a word family may not always contain every part of speech. Look at the word family for the word individual.

<table>
<thead>
<tr>
<th>Part of Speech</th>
<th>Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun (n.)</td>
<td>individual, individualism, individuality</td>
</tr>
<tr>
<td>Noun (person)</td>
<td>individual</td>
</tr>
<tr>
<td>Verb (v.)</td>
<td>individualize</td>
</tr>
<tr>
<td>Adjective (adj.)</td>
<td>individual, individualistic</td>
</tr>
<tr>
<td>Adverb</td>
<td>(adv.) individually</td>
</tr>
</tbody>
</table>

Exercise 4: Word Families

Use these words to fill in the word family chart. Follow the example given. Some words may be used more than once.

<table>
<thead>
<tr>
<th>Accumulate</th>
<th>Automate</th>
<th>Establish</th>
<th>Estimate</th>
<th>Final (2x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulation</td>
<td>Automatic</td>
<td>Established</td>
<td>Estimation</td>
<td>Finalist</td>
</tr>
<tr>
<td>Accumulative</td>
<td>Automatically</td>
<td>Establishment</td>
<td>Estimator</td>
<td>Finalize</td>
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<tr>
<td>Automation</td>
<td></td>
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<td>Finally</td>
</tr>
<tr>
<td>Monitor (3x)</td>
<td>Participate</td>
<td>Percent</td>
<td>Physical (2x)</td>
<td>Professional (2x)</td>
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<tr>
<td>Monitorial</td>
<td>Participant</td>
<td>Percentage</td>
<td>Physically</td>
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<td>Participation</td>
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<td>Noun</td>
<td>Noun (person)</td>
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<td>Adjective</td>
<td>Adverb</td>
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<td>sustain</td>
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</tbody>
</table>
Exercise 5: Word Forms

Complete each sentence with the correct form of the word.

1. Any rider who uses drugs is ____________ out of the race.
   automatic  automaton  automatically  automation

2. Lance ____________ himself as the best cyclist in the world by winning the Tour de France seven times in a row.
   establish  establishment  established  establishing

3. It was a very close race. The three ____________ crossed the finish line within seconds of one another.
   final  finalists  finalize  finally

4. At the end of each day, the ____________ winner is the person with the day's fastest time.
   individual  individualize  individualism  individually

5. America’s natural ____________ include coal, oil, natural gas, and timber.
   resourcefulness  resourceful  resourcefully  resources

6. It takes great ____________ and mental strength to survive an exhausting race like the Tour de France.
   physical  physicals  physically
Understanding Words in Context

Exercise 6: Word Meanings in Context

For each meaning, find the word in the reading for that meaning and write it on the line. The number in parentheses is the number of the paragraph where the word occurs. The first one has been done for you.

1. took part in (1) _______________  
   2. approximately, about (5) _______________  
   3. devices that measure and record information about the body (6) _______________  
   4. having to do with the body (9) _______________  
   5. things that one has and can use (9) _______________  
   6. always happens as a normal result of something else (12) _______________  
   7. one particular person (12) _______________  

Collocations

Words that often appear together, or that are usually associated with one another, are called *collocations*. You can think of them as *word friends*. Take the word *mountain*. Some words that collocate with the word *mountain* are:

- bike *mountain bike*  
- pass *mountain pass*  
- peak *mountain peak*  

Can you think of any other words that collocate with *mountain*? How about *climbing, road, stream, and view*?
Exercise 7: Collocations

Match the four words with their common collocations, or the words they often appear together with. Write the combinations on the lines provided. Can you think of any other words that collocate with these? Add them. One has been done for you.

- decision
- exam
- entry
- financial
- natural
- offer
- physical
- processing
- raw
- scientific
- transmission
- weapon

1. automatic  ________________

2. data  ________________

3. final  ________________

4. resources  ________________

- automatic transmission
- financial entry
- offer transmission
- natural weapon
Using Words in Communication

Exercise 8: Reading for Details

1. Re-read Reading 3: Stage Racing. Read the table, and then answer the questions.

<table>
<thead>
<tr>
<th>Rank after Stage 14</th>
<th>Stage 13 July 19</th>
<th>Stage 14 July 20</th>
<th>Stage 15 July 21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stage Time</td>
<td>Total Time</td>
<td>Stage Time</td>
</tr>
</tbody>
</table>

1. The time “5:17:16,” which is underlined in the table, can be read and written as “5 hours, 17 minutes, and 16 seconds.” Write out the other stage times for Stage 13 in the same way.

________________________________________________________________
________________________________________________________________

2. Who was the individual winner of Stage 13? Who was in second place? Who was in third?

Winner _________________________
Second place ____________________
Third place ______________________

3. Which rider was the GC winner after Stage 13? ________________________

What was his total time? ____________________________________________
Exercise 9: Writing

Put these events in order, beginning with Lance's childhood. Then use this information to write one or two paragraphs about Lance Armstrong. The first one has been done for you.

_______ is the only person who has won the Tour de France seven years in a row

_______ participated in his first professional race in 1992 and finished last

_______ trained with the Olympic cycling team when he was a senior in high school

_______ found out that he had cancer in 1996

_______ participated in the Barcelona Olympics in 1992

_______ continues to help other cancer patients and cancer survivors through the Lance Armstrong Foundation

1_______ was born in 1971 in Plano, Texas

_______ survived two cancer surgeries and chemotherapy

_______ joined a swim club when he was 12

_______ was the top cyclist in the world in 1996

_______ won his first triathlon when he was 13

_______ started training again only five months after his cancer was diagnosed

_______ began competing in races again in 1998
Exercise 10: Critical Thinking

These questions will help you develop your critical thinking skills. Critical thinking helps you understand and evaluate information. It helps you reach reasonable conclusions from the information that is given. Ask yourself these questions as you work on your answers: What information in the reading supports my answer? What other information do I have to support my conclusion? Where can I get more information about the topic?

1. How is the Tour de France of today different from the first Tour de France? Do you think the race is easier now? Why or why not? Give examples from the readings to support your answer.

2. Lance Armstrong says that “the winning is really in the details.” What does he mean by that? Support your answer with details from the readings.