

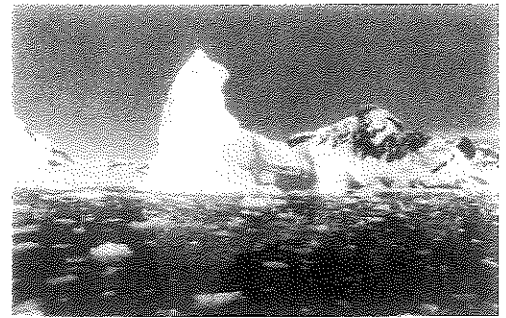
# Context Clues

For  
Word  
Wisdom

Land of Ice:

## Antarctica

Find a globe, and point to your city or town. Then move your finger south until it reaches the bottom of the globe. Your finger is on Antarctica, Earth's southernmost continent. Read this informational article to learn about Antarctica.



Imaginary lines of **longitude** run north and south over the surface of the earth. They are used to locate places on our planet. The lines meet on the dome of each **hemisphere** at the North Pole and the South Pole. The land that surrounds the South Pole is Antarctica, the fifth largest continent on Earth.

Antarctica is a **unique** land of extremes. It is the coldest place on Earth. The winter temperature has been measured at a record-breaking  $-89^{\circ}$  Celsius ( $-128^{\circ}$  Fahrenheit). Summer temperatures rarely rise above freezing. It is the windiest place on Earth, too. Bitter winds blast coastal areas at 190 kilometers (118 miles) per hour. Antarctica is also one of the driest lands on Earth. Inland, it receives only about 5 centimeters (2 inches) of snowfall a year. Because of the **frigid** temperatures, very little of the snow melts. This results in **massive** layers of ice covering almost all of Antarctica. The

average thickness of the ice is more than 2 kilometers (about  $1\frac{1}{4}$  miles)!

Few plants and animals live on this icy land. In contrast, life is abundant in the surrounding ocean. Vast quantities of tiny **microscopic** plants and animals drift in the water. They are the basic food supply for fish, birds, seals, and whales.

The people who know Antarctica best are scientists. At research **sites**, scientists gather all sorts of information. They study wildlife, rocks, the ocean, sunlight, and the atmosphere. Some scientists study ice. They use drilling **devices** to lift out layers of ice. The layers hold clues about Earth's climate over many thousands of years. Scientists look at past **variations** to predict future climate changes.

Antarctica is hard to reach, a **solitary** continent far from home. For curious scientists, however, Antarctica is one of the best places to learn about Earth.


## Context Clues Strategy

### Look for What the Word Is Used For


**EXAMPLE:** The best-known birds of Antarctica are penguins, whose *adaptations* allow them to survive the harsh winters.

**CLUE:** The phrase *to survive the harsh winters* tells what *adaptations* are used for.


Here are the steps for using this context clues strategy to figure out the meaning of the word *longitude*.

 **Read** the sentence with the unknown word and some of the sentences around it.

*Imaginary lines of longitude run north and south over the surface of the earth. They are used to locate places on our planet.*

 **Look** for context clues. Do any words describe What the Word Is Used For?

The words *used to locate places on our planet* explain what the word *longitude* is used for.

 **Think** about the context clues and other information you may already know.

I know we use lines on maps to figure out where places are in social studies.

 **Predict** a meaning for the word.

*Longitude* might mean “location on the earth’s surface.”

 **Check** the Word Wisdom Dictionary to be sure of the meaning.

The word *longitude* means “distance on the earth’s surface, measured east or west from the prime meridian.”



# Unlock the Meanings

Practice the Strategy A boldfaced word from the article on page 94 is in the box below. Use the context clues strategy on page 95 to figure out the meaning of this word.

**device**

**Read** the sentence that includes the word *device* and some of the sentences around it.

**Look** for context clues to the word's meaning. Do any words describe **What the Word Is Used For**?

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**Think** about the context clues. What other helpful information do you know?

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**Predict** a meaning for the word *device*.

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**Check** your Word Wisdom Dictionary to be sure of the meaning of *device*. Write the meaning here.

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**Use Context Clues** Two words you have learned from the article are checked off in the Word List. In the first column, write the other eight words from the Word List. In the second column, predict a meaning for each word. Look up the meaning in your Word Wisdom Dictionary. Write the dictionary meaning in the third column.

- longitude
- hemisphere
- unique
- frigid
- massive
- microscopic
- site
- device
- variation
- solitary

<b>Vocabulary Word</b>	<b>Your Prediction</b>	<b>Dictionary Says</b>
<b>1</b>		
<b>2</b>		
<b>3</b>		
<b>4</b>		
<b>5</b>		
<b>6</b>		
<b>7</b>		
<b>8</b>		

# Process the Meanings

## WORD LIST

longitude

hemisphere

unique

frigid

massive

microscopic

site

device

variation

solitary

**Find Synonyms** Write the word from the Word List that is a synonym for the boldfaced word or words in each sentence below.

**1** Antarctica is in the southern **half** of the earth.

\_\_\_\_\_

**2** A lone ship sailed into the sea of **ice**.

\_\_\_\_\_

**3** Extremely **small** life forms survive inside rocks.

\_\_\_\_\_

**4** Some icebergs are as **huge** as islands.

\_\_\_\_\_

**5** The weather scientist used a **balloon** as a measuring **tool**.

\_\_\_\_\_

**6** The South Pole is a **place** for scientific research.

\_\_\_\_\_

**7** Antarctica is a **one-of-a-kind** continent.

\_\_\_\_\_

**8** Antarctic winters are dark and **extremely** cold.

\_\_\_\_\_

**9** One **difference** among the species of penguins is size.

\_\_\_\_\_

**10** Sailors keep track of their ship's east-west **position**.

\_\_\_\_\_

## Apply What You've Learned

**Explain Differences** Write the answer to each question.

1 What is the difference between a sphere and a hemisphere?

\_\_\_\_\_

2 Would you want a unique haircut or an ordinary one? Why?

\_\_\_\_\_

3 Would you prefer to be outdoors on a chilly day or a frigid day?

Why? \_\_\_\_\_

4 What is the difference between a massive desk and a messy

desk? \_\_\_\_\_

5 How is a site different from a sight?

\_\_\_\_\_

**Tell Why** Read each statement. Tell why the statement is true.

6 New York City and San Francisco are at different longitudes.

\_\_\_\_\_

7 Reading can be a solitary activity.

\_\_\_\_\_

8 Germs that cause illness are microscopic.

\_\_\_\_\_

9 A thermometer is a device for measuring temperature.

\_\_\_\_\_

10 Some places have extreme variations in temperature.

\_\_\_\_\_



**Write It!** Write a paragraph for a tourist brochure advertising Antarctica. Use as many words from Part 1 as you can.

# Latin Roots

For  
Word  
Wisdom

Singing Together:

## Merry Measures

Choral singing is everywhere. There are church choirs. There are school choirs. And there are professional choruses in cities around the world. But what is choral singing really all about?

If you like **solitude**, then choral singing is not for you. Working with others is one of the most important parts of choral singing. Think of it as a team sport: Everyone must work together in order to do well. It is this “working together” that gives a chorus its sense of **unity**. It is not individual singers; it is many singers forming one thing.

In a chorus the singers often sing in **unison**, blending their voices together. But it is not always everyone singing at once. Sometimes, **various** parts of the chorus will take turns singing. These different groups within the larger chorus might be separated by singing style. One group might have high singing voices. Another group might have low singing voices. These groups might even take turns singing different lines of a song. These kinds of changes add **variety** to the style and sound of a chorus.


There are other moments of variety in choral singing. Sometimes, one singer will sing a part of a song alone. In a performance, this **soloist** may or may not stand apart from the rest of the chorus. Some choruses will sing along with an orchestra that provides instrumental music to the program. These choruses are often called symphony choruses. Other choruses are the **sole** music-makers on stage. They make music with their voices alone.


Choruses come in all sizes; the sizes are **variable**. A small town’s chorus might have fewer than twenty members. A chorus in a major city might have a few hundred people. All chorus members must have an understanding of music. They must know the **units** for measuring music. They must know how each musical key sounds. Choruses may be different all around the world, but these details of music are **universal** for all.


If you love music, treat yourself to seeing a choral performance. You will be amazed at how skillful the singers are at blending their voices. And you might learn something about working together!


Practice the **Context Clues Strategy** Here is one of the boldfaced words from the essay on page 100. Use the context clues strategy you learned in Part 1 on page 95 to figure out the meaning of this word.


**unison**

 **Read** the sentence that uses the word *unison*. Read some of the sentences around the word.

 **Look** for context clues to the word's meaning. Do any words describe **What the Word Is Used For**?

 **Think** about the context clues. What other helpful information do you know?

 **Predict** a meaning for the word *unison*.

 **Check** your Word Wisdom Dictionary to be sure of the meaning of the word *unison*. Write the definition here.



# Unlock the Meanings

The Latin roots that you will learn in this unit are all related to measurement. See if you can tell how all the words with the same root are related in meaning.

Latin Root: *sol, soli*  
 meaning: alone  
 English word: *solitary*  
 meaning: being alone

Latin Root: *uni*  
 meaning: one  
 English word: *unique*  
 meaning: one of a kind

Latin Root: *vari*  
 meaning: many  
 English word: *variation*  
 meaning: a slightly different kind

## WORD LIST

solitude

unity

unison

various

variety

soloist

sole

variable

unit

universal

**Sort by Roots** Look at the Word List to find the roots that you just learned. Write each word under the correct root. Think of other words that come from the same Latin root. Write each word in the correct place.

Latin Root:  
**sol, soli**

Latin Root:  
**uni**

Latin Root:  
**vari**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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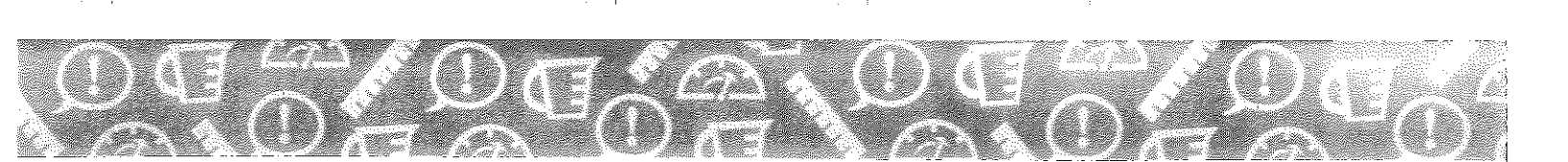
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Measurement**



**Use Roots** Circle the root in each boldfaced word. Then use your knowledge of roots and context clues to write the meaning of each word. Check your definitions in the *Word Wisdom Dictionary*.

**1** We planted a variety of flowers, including mums, roses, and pansies.

\_\_\_\_\_

**2** Aram's sole reason for taking the trip was to see the Grand Canyon.

\_\_\_\_\_

**3** All people understand the universal need for food and shelter.

\_\_\_\_\_

**4** Standing in front of the orchestra, the soloist played her violin.

\_\_\_\_\_

**5** A meter is a unit of length used to measure distances.

\_\_\_\_\_

**6** The size of the crowd at our soccer matches is variable.

\_\_\_\_\_

**7** Our whole class answered the question in unison.

\_\_\_\_\_

**8** To find solitude, I leave the city and go to the desert.

\_\_\_\_\_

**9** We looked at various computers and bought the silver laptop.

\_\_\_\_\_

**10** The countries showed unity by signing a trade agreement.

\_\_\_\_\_

# Process the Meanings

## WORD LIST

solitude

unity

unison

various

variety

soloist

sole

variable

unit

universal

**Match the Synonyms** Match each vocabulary word with its synonym. Write the synonym on the line.

### Vocabulary Word

### Synonym

- |                          |            |
|--------------------------|------------|
| <b>1</b> universal _____ | oneness    |
| <b>2</b> variable _____  | assortment |
| <b>3</b> sole _____      | global     |
| <b>4</b> variety _____   | only       |
| <b>5</b> unity _____     | changeable |

**Complete the Meanings** Write the word that best completes each sentence.

- 6** Someone who enjoys **solitude** likes being \_\_\_\_\_  
a. alone                      b. outdoors                      c. inside
- 7** When people sing in **unison**, they sing \_\_\_\_\_  
a. quietly                      b. one at a time                      c. together
- 8** A soloist usually performs \_\_\_\_\_ by himself or herself.  
a. comedy                      b. gymnastics                      c. music
- 9** If people are reading **various** books, the books are all \_\_\_\_\_  
a. interesting                      b. different                      c. difficult
- 10** A **unit** is an exact \_\_\_\_\_ used for measuring.  
a. amount                      b. weight                      c. scale

# Apply What You've Learned

**Find Examples** Read each description below. Then put a check mark (✓) beside every example that matches the description.

**1** what you're likely to see a soloist do

\_\_\_\_\_ sing a song

\_\_\_\_\_ play a trumpet

\_\_\_\_\_ announce an act

\_\_\_\_\_ do a trick

**2** places you could find solitude

\_\_\_\_\_ in your room

\_\_\_\_\_ in a crowded mall

\_\_\_\_\_ on a mountaintop

\_\_\_\_\_ at a basketball game

**3** units of measurement

\_\_\_\_\_ gram

\_\_\_\_\_ ruler

\_\_\_\_\_ hour

\_\_\_\_\_ pint

**4** things that are **variable**

\_\_\_\_\_ the weather

\_\_\_\_\_ a person's mood

\_\_\_\_\_ students in school

\_\_\_\_\_ days in a week

**5** acting in **unison**

\_\_\_\_\_ teachers in a dialogue

\_\_\_\_\_ classmates reciting a poem

\_\_\_\_\_ brothers playing catch

\_\_\_\_\_ dancers doing steps

**Find Correct Uses** Decide whether the boldfaced word has been used correctly. Write **C** for **correct** or **I** for **incorrect**.

**6** The team showed **unity** by cheering for all the players. \_\_\_\_\_

**7** Every Friday we rent **various** movies at the video store. \_\_\_\_\_

**8** Earth is the **sole** planet among all the planets. \_\_\_\_\_

**9** Humans have a **universal** need for water. \_\_\_\_\_

**10** Because of the **variety** in temperature, I wore a jacket. \_\_\_\_\_



**Speak It!** Give a short talk describing your favorite kind of music and tell why it is your favorite. Use as many of the words from Part 2 as possible.

# Reference Skills

For  
Word  
Wisdom

Food Science:

## Measuring Cookies

Have you ever thought about cookies? Of course you have. But have you ever *really* thought about cookies? Read this article to learn more about the science of baking.

When you think about science, you might picture a scientist in a white lab coat. She is pouring a steaming liquid into a beaker. But there is more to science. It is all around us, even in the kitchen.

A cookie recipe is a scientific, **enumerated** list of food ingredients. Bakers **calculate** the proper mixture of ingredients by experimenting just like scientists do. That's why a baker is sometimes called a food scientist.

To find the perfect recipe, a baker will try many versions of the same recipe. He will **evaluate** how changes in the recipe affect the final product. The baker will keep track of these differences. When the experiment is finished, a **comparison** of the results identifies the tastiest cookie!

Each of the basic cookie ingredients has a job. To get the best cookies, you must use **accurate** amounts of the ingredients. Baking is a precise science. In regular

cooking, you can **estimate** how much of something you need to use. In baking, guessing about amounts is not a good idea. Science might decide to ruin your recipe for you!


Most cookie recipes begin with flour. Some kinds of flour make cookies soft, while others make cookies crunchy. A recipe will **identify** which kind of flour is best. Cookies also use sugar. Sugar is not just for taste. The chemical properties in sugar help make a cookie's shape. Certain kinds of sugar will make cookies thin and wide. Other kinds **reduce** a cookie's ability to spread out, making them thick and compact.


Without a leavening agent, cookies would be as hard and flat as crackers! Baking powder is a good leavening agent. When you add a liquid to baking powder, carbon dioxide **accumulates**. Carbon dioxide produces bubbles like the bubbles in soda. In cookies, these bubbles help **inflate** the dough, making it fluffy.

Of course, chocolate chips, oatmeal, raisins, and nuts all give cookies flavor. Ask an adult to help you experiment with cookie recipes. Maybe you will want to be a food scientist someday!

~~Practice the Context Clues Strategy~~ Here is one of the boldfaced words from the article on page 106. Use the context clues strategy you learned in Part 1 on page 95 to figure out the meaning of this word.

**inflate**


 **Read** the sentence that uses the word *inflate*. Read some of the sentences around the word.

 **Look** for context clues to the word's meaning. Do any words describe **What the Word Is Used For**?

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 **Think** about the context clues. What other helpful information do you know?

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 **Predict** a meaning for the word *inflate*.

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---

 **Check** your Word Wisdom Dictionary to be sure of the meaning of the word *inflate*. Which of the meanings for *inflate* fits the context? Write the definition here.

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## Unlock the Meanings

**Dictionary Pronunciations** In addition to a word's meaning, a dictionary entry tells a word's pronunciation, syllables, and part of speech. The pronunciation respelling that follows the entry word uses letters and symbols to show how to say the word correctly. In some dictionaries, the part of speech label is abbreviated.

cal·cu·late /kāl' kyə lāt' / v.

Spaces or dots show where syllables begin and end.

Accent marks show which syllables are stressed.

The abbreviation tells the part of speech.

**Use Pronunciations to Answer Questions** Answer each question. Use the pronunciation respellings below.

e·val·u·ate /ī vāl' yōō āt'/

re·duce /rī dōōs'/

es·ti·mate /ēs' tə māt'/

- 1 How many syllables are in the word *evaluate*? \_\_\_\_\_
- 2 Which syllable in *reduce* is stressed? \_\_\_\_\_
- 3 Which syllables in *evaluate* are stressed? \_\_\_\_\_
- 4 Which syllable in *reduce* has a short vowel sound? \_\_\_\_\_
- 5 Which syllable in *estimate* has a long vowel sound? \_\_\_\_\_
- 6 How many syllables are in *reduce*? \_\_\_\_\_
- 7 How many syllables are in *estimate*? \_\_\_\_\_
- 8 Which syllables in *estimate* are stressed? \_\_\_\_\_
- 9 Which syllables in *evaluate* have a long vowel sound? \_\_\_\_\_
- 10 Which syllables in *estimate* have a short vowel sound? \_\_\_\_\_



**Find  
the  
Meaning**

1. Use context clues.
2. Look for a familiar root, prefix, or suffix.
3. If the context or a word part doesn't help, check the dictionary.

**Define the Words** Follow the steps above to write the meaning of each boldfaced word. Then write 1, 2, or 3 to show which steps you used.

- 1 Adam was able to **reduce** his weight with exercise.  
\_\_\_\_\_
- 2 You can use a hand pump to **inflate** bicycle tires.  
\_\_\_\_\_
- 3 The pilot **estimated** the flight would take five hours, but she wasn't sure.  
\_\_\_\_\_
- 4 My **comparison** of the two movies showed their similarities.  
\_\_\_\_\_
- 5 She carefully checked her report to be sure that it was **accurate**.  
\_\_\_\_\_
- 6 Jason hopes to **accumulate** many fossils for his collection.  
\_\_\_\_\_
- 7 The lifeguard **enumerated** the safety rules for using the pool.  
\_\_\_\_\_
- 8 To **identify** some kinds of birds, Luis listens to their songs.  
\_\_\_\_\_
- 9 Knowing the speed of light helped Lindsay **calculate** the distance to the star.  
\_\_\_\_\_
- 10 Our teacher gave us a checklist to **evaluate** our essays.  
\_\_\_\_\_

**WORD LIST**

enumerate  
calculate  
evaluate  
comparison  
accurate  
estimate  
identify  
reduce  
accumulate  
inflate





# Process the Meanings

## WORD LIST

enumerate

calculate

evaluate

comparison

accurate

estimate

identify

reduce

accumulate

inflate

**Identify Synonyms** Write the word that is the best synonym for each boldfaced word.

**1** an accurate measurement \_\_\_\_\_  
a. identical                      b. excellent                      c. exact

**2** to reduce the amount \_\_\_\_\_  
a. guess                              b. decrease                      c. measure

**3** enumerated their reasons \_\_\_\_\_  
a. spelled                              b. listed                              c. added

**4** quietly **accumulating** nuts for winter  
\_\_\_\_\_  
a. growing                              b. hiding                              c. gathering

**5** could **identify** the suspect \_\_\_\_\_  
a. recognize                              b. locate                              c. help

**6** **evaluated** each skater's performance  
\_\_\_\_\_  
a. judged                              b. enjoyed                              c. watched

**Revise Sentences** Rewrite each sentence. Replace the underlined words with a vocabulary word. You may have to add an ending to the word.

**7** Aunt Kate used math to figure out the cost of a vacation.  
\_\_\_\_\_

**8** We figured out roughly the number of cars on the road.  
\_\_\_\_\_

**9** Our study of similarities in cameras led us to buy this one.  
\_\_\_\_\_

**10** The raft must be expanded with air before you can use it.  
\_\_\_\_\_



## Apply What You've Learned

**Give Examples** Write a sentence that gives an example for each description below. Use the boldfaced words in your answers.

**1** a country you can identify on a map or a globe

---

**2** something you are accumulating in your locker or room

---

**3** a way you can evaluate your progress in school

---

**4** a time when it is important for you to be accurate

---

**5** something in nature that can't be calculated

---

**6** a point of comparison between two dogs

---

**7** something that can be inflated

---

**8** something that should be reduced

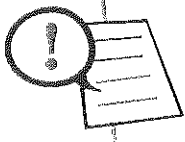
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**9** something that you have to estimate

---

**10** one right that is enumerated in the Constitution

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**Write It!** Write questions you would ask a scientist in an interview. Use as many of the words from Part 3 as you can.