

# LESSON 8 THE ROOTS -BIO- AND -VIT-

8

The English language is filled with words that have something to do with life. The roots *-bio-* and *-vit-* both come from words meaning "life." The root *-bio-* comes from the Greek word *bios*, and the root *-vit-* comes from the Latin word *vita*. The words *biology* and *vitamin* are derived from these roots. *Biology* is the study of living things, and *vitamins* are organic compounds necessary for maintaining normal life functions. In this lesson, you will learn other words that are related to life.

## WORD LIST

antibiotic  
biopsy  
biosphere  
devitalize  
microbe  
symbiosis  
viable  
vitality  
vivacious  
vivid

## DEFINITIONS

After you have studied the definitions and example for each word, write the vocabulary word in the blank to the right.

1. **antibiotic** (ăn' tī-bī-ōt'īk) *noun* A substance produced by certain fungi, bacteria, or other organisms. This substance stops the growth of harmful bacteria that can cause illness. *adjective* Of, using, or acting as an antibiotic. (From the Greek *anti-*, meaning "against," and *bios*, meaning "life")

**Example** Penicillin is an effective *antibiotic* that is used against such infections as pneumonia.

1. \_\_\_\_\_

2. **biopsy** (bī'ōp'sē) *noun* a. The removal of tissue from a living person for examination or study. b. The study of such tissue. (From the Greek words *bios* and *opsis*, meaning "a sight")

**Example** Hoping to identify the patient's disease, the doctor performed a *biopsy*.

2. \_\_\_\_\_

3. **biosphere** (bī'ō-sfīr') *noun* The part of Earth and its atmosphere in which living things exist. (From the Greek words *bios* and *sphaira*, meaning "sphere")

**Example** Plants, animals, and human beings inhabit the *biosphere*.

3. \_\_\_\_\_

4. **devitalize** (dē-vī'l-īz') *verb* To lower or destroy the physical energy or vigor of someone or something. (From the Latin *de-*, meaning "from," and *vita*, meaning "life")

**Example** A bad case of the flu *devitalized* Betsy for two weeks.

4. \_\_\_\_\_  
MEMORY CUE: Someone who is *devitalized* is lacking *vitality* or energy.

5. **microbe** (mī'krōb') *noun* A tiny life form that can be seen only through a microscope; a germ. (From the Greek words *mikros*, meaning "small," and *bios*)

**Example** Through years of study, scientists have discovered that *microbes* cause many diseases.

6. **symbiosis** (sīm'bē-ō'sīs) *noun* A close, beneficial relationship between two or more organisms. These organisms often, but not always, benefit each other. (From the Greek *syn-*, meaning "together," and *bios*)

**Related Word** *symbiotic adjective*

**Example** An alga and a fungus live together in beneficial *symbiosis* to create a plant called lichen.

7. **viable** (vī'ə-bəl) *adjective* a. Capable of continuing to live, grow, or develop under favorable conditions. b. Capable of working successfully or effectively: a *viable plan*. (From the Latin word *vita*, meaning "life")

**Related Words** *viability noun; viably adverb*

**Example** When seeds from an ancient tomb were planted, they were found to be *viable*.

8. **vitality** (vī-tāl'ī-tē) *noun* a. Physical or mental energy; vigor. b. The quality that distinguishes the living from the nonliving. (From the Latin word *vitalis*, meaning "alive")

**Related Word** *vital adjective*

**Example** Uncle Bob, who exercises two hours a day, is bursting with *vitality*.

9. **vivacious** (vī-vā'shəs) *adjective* Full of spirit; lively. (From the Latin word *vivere*, meaning "to live")

**Related Words** *vivaciously adverb; vivacity noun*

**Example** For Melanie and her *vivacious* party guests, there was always something to celebrate.

10. **vivid** (vīv'īd) *adjective* a. Bright, distinct, and intense. b. Creating lifelike images within the mind. (From the Latin word *vivere*, meaning "to live")

**Related Words** *vividly adverb; vividness noun*

**Example** Stan marveled at the *vivid* colors of the parrots in the zoo.

NAME \_\_\_\_\_

DATE \_\_\_\_\_

**EXERCISE 1 MATCHING WORDS AND DEFINITIONS**

Match the definition in Column B with the word in Column A. Write the letter of the correct definition on the answer line.

**Column A**

1. symbiosis
2. vivid
3. devitalize
4. biopsy
5. vivacious
6. microbe
7. antibiotic
8. viable
9. biosphere
10. vitality

**Column B**

- a. lively and spirited
- b. to lower the physical energy of
- c. the removal of living tissue for study
- d. bright and intense
- e. tiny life form
- f. physical or mental energy
- g. the part of Earth and the atmosphere in which living things exist
- h. substance used to destroy or stop growth of microorganisms
- i. able to live or develop under favorable conditions
- j. the relationship of organisms living closely together

USE BLANKS

DO NOT  
DRAW  
LINES

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

**EXERCISE 2 USING WORDS CORRECTLY**

Each of the following questions contains an italicized vocabulary word. Decide the answer to the question, and write *Yes* or *No* on the answer line.

1. Does an *antibiotic* promote the growth of bacteria?
2. Could a *biopsy* aid a doctor in the diagnosis of disease?
3. Does the sun form part of the *biosphere*?
4. Would a runner be *devitalized* after a twenty-six mile run?
5. Is a *microbe* a large organism that destroys bacteria?
6. Is there more than one organism involved in *symbiosis*?
7. Can a plan that will not work be described as *viable*?
8. Does two hours of aerobic exercise require great *vitality*?
9. Would a *vivacious* spectator sit quietly in the stands during an exciting baseball game?
10. Is gray considered a *vivid* color?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

**EXERCISE 3 CHOOSING THE BEST WORD**

Decide which vocabulary word or related form best completes the sentence, and write the letter of your choice on the answer line.

1. When Harold was very ill, the doctor gave him a(n) \_\_\_\_\_ to fight the infection.  
a. antibiotic      b. symbiosis      c. microbe      d. biopsy

2. Janet's energetic lifestyle reflected her great \_\_\_\_\_.  
a. biosphere      b. vividness      c. symbiosis      d. vitality
3. The area of Earth called the \_\_\_\_\_ allows the growth of living things.  
a. symbiosis      b. biosphere      c. antibiotic      d. microbe
4. The runner was \_\_\_\_\_ by thirst during the last mile of the race.  
a. made viable      b. made vivid      c. made vivacious      d. devitalized
5. The scientists discovered a harmful \_\_\_\_\_.  
a. antibiotic      b. symbiosis      c. microbe      d. biosphere
6. The term \_\_\_\_\_ can be used to describe a close, beneficial relationship between two or more organisms.  
a. biopsy      b. symbiosis      c. biosphere      d. microbe
7. Doctors said that the patient's skin graft was \_\_\_\_\_.  
a. vivacious      b. vivid      c. symbiotic      d. viable
8. The doctor ordered a(n) \_\_\_\_\_ to help her in diagnosing the illness.  
a. biopsy      b. microbe      c. symbiotic      d. viable
9. The \_\_\_\_\_ young artist talked animatedly with every gallery owner at the party.  
a. viable      b. devitalized      c. vivacious      d. antibiotic
10. The novelist presented a(n) \_\_\_\_\_ picture of life in a frontier society.  
a. viable      b. antibiotic      c. symbiotic      d. vivid

#### EXERCISE 4: USING DIFFERENT FORMS OF WORDS

Decide which form of the italicized vocabulary word best completes the sentence. The form given may be correct. Write your answer on the answer line.

1. The physician studied a report on the patient's \_\_\_\_\_. (*biopsy*)
2. The tour guide waved \_\_\_\_\_ from the front seat of the bus. (*vivacious*)
3. Reaching the top of the mountain, the \_\_\_\_\_ group gave a weak cheer. (*devitalize*)
4. The Olympic champion \_\_\_\_\_ described the moment when she won a gold medal. (*vivid*)
5. The doctor decided to treat Ann's strep throat with an \_\_\_\_\_. (*antibiotic*)
6. The Portuguese man-of-war has a \_\_\_\_\_ relationship with small fish that live among its tentacles. (*symbiosis*)
7. Looking through the microscope, the scientist inspected the many \_\_\_\_\_. (*microbe*)
8. The use of pesticides resulted in a decrease in the \_\_\_\_\_ of the eagles' eggs. (*viable*)
9. Most viewers are awed by the \_\_\_\_\_ of Vincent Van Gogh's paintings. (*vivid*)
10. "All of the patient's \_\_\_\_\_ signs are good," the nurse told Dr. Freedman. (*vitality*)