

## Section 1–3 Studying Life (pages 16–22)

*This section describes the characteristics of living things. It also explains how life can be studied at different levels.*

### Introduction (page 16)

1. What is biology? \_\_\_\_\_  
\_\_\_\_\_

### Characteristics of Living Things (pages 16–20)

2. What is a cell? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Circle the letter of each sentence that is true about cells.

- a. A cell is the smallest unit of an organism that can be considered alive.
- b. A multicellular organism may contain trillions of cells.
- c. A living thing that consists of a single cell is a multicellular organism.
- d. Organisms are made up of cells.

4. What are two types of asexual reproduction?

- a. \_\_\_\_\_
- b. \_\_\_\_\_

5. Living things are based on a universal \_\_\_\_\_.

6. Circle the letter of each sentence that is true about living things.

- a. The life cycle of many organisms involves development.
- b. For bacteria, growth is mostly a simple increase in size.
- c. Each type of organism has a distinctive life cycle.
- d. Cells may change in number but never differentiate.

7. Why does an organism need energy and a constant supply of materials?

\_\_\_\_\_  
\_\_\_\_\_

8. What is metabolism? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. Is the following sentence true or false? All organisms respond to the environment in exactly the same ways. \_\_\_\_\_

10. What is homeostasis? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

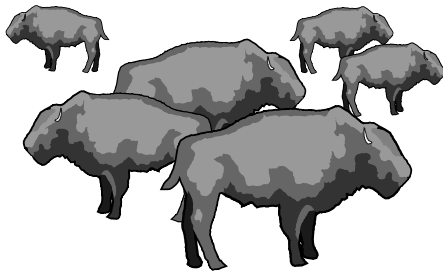
11. A group of organisms that changes over time is said to \_\_\_\_\_.

### Branches of Biology (pages 20–21)

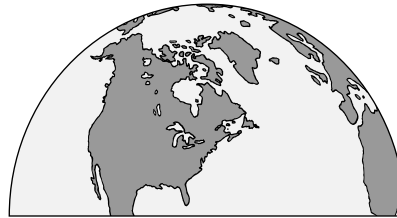
Match the different kinds of biologists with the focus of their study.

Kinds of Biologists	Focus of Study
_____ 12. Zoologist	a. Plants
_____ 13. Botanist	b. Ancient life
_____ 14. Paleontologist	c. Animals

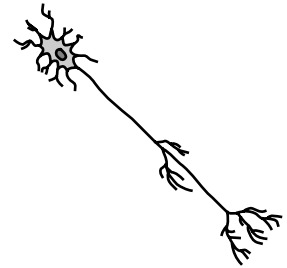
15. Label each of the illustrations below according to the level of study represented.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

16. The largest level of biological study is the \_\_\_\_\_.

### Biology in Everyday Life (page 22)

17. What kinds of information can the study of biology provide about matters affecting human society? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## Section 19–2 Viruses (pages 478–483)

*This section describes the structure of a virus. It also explains how viruses cause infection.*

### What Is a Virus? (pages 478–479)

1. What are viruses? \_\_\_\_\_  
\_\_\_\_\_
2. What do all viruses have in common? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Is the following sentence true or false? Most viruses are so small that they can be seen only with the aid of a powerful electron microscope. \_\_\_\_\_
4. What is the structure of a typical virus? \_\_\_\_\_  
\_\_\_\_\_
5. Circle the letter of what a virus's protein coat is called.  
a. capsid      b. envelope      c. head      d. lysis
6. How does a typical virus get inside a cell? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. What occurs when viruses get inside of cells? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. Why are most viruses highly specific to the cells they infect? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. What are bacteriophages? \_\_\_\_\_

### Viral Infection (pages 480–481)

10. Why is a lytic infection given that name? \_\_\_\_\_  
\_\_\_\_\_
11. Circle the letter of each sentence that is true about a lysogenic infection.
  - a. The virus lyses the host cell immediately.
  - b. The virus embeds its DNA into the host's DNA.
  - c. The virus's DNA is replicated along with the host cell's DNA.
  - d. A host cell makes copies of the virus indefinitely.